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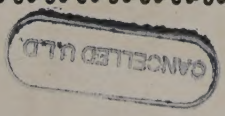

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DOMESTIC HANDICRAFTS

A PRACTICAL HANDBOOK GIVING DIRECTIONS FOR THE GENERAL MAINTENANCE OF HOUSEHOLD FURNITURE, FITTINGS, ETC.

BY

M. HELEN MURRAY

MEMBER OF STAFF, BATTERSEA TRAINING COLLEGE OF DOMESTIC SCIENCE.
LATE MEMBER OF STAFF, NATIONAL TRAINING SCHOOL OF COOKERY
AND OTHER BRANCHES OF DOMESTIC ECONOMY

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AUTHOR'S NOTE

THIS book is intended as a practical guide for those students in training in Domestic Science Colleges whose studies include the home arts in all branches ; and for teachers who wish to introduce a course of Domestic Handicrafts in the ordinary day school.

No pretence is made to deal with definite craft work, such as might be required of advanced and professional workers. At the same time, the directions for carrying out the many little repairs that become necessary from time to time in every household—and which usually involve the calling in of a skilled tradesman—are exceptionally clear and practical, so that the book should be found a very useful means of economy by the average householder.

My grateful thanks are due to Miss J. Ridpath, who has been responsible for the drawings.

1925. M. H. M.

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INTRODUCTION

" Without tools a man can do nothing ; with tools he is all."
CARLYLE.

THE purpose of this little book is to present its subject-matter in such simple form that, with a small amount of practice and experience, the beginner may achieve good results.

Nowadays, we are aiming at education in a much wider sense than formerly, and the fact that Domestic Handicraft is considered a necessary part of Education is undoubtedly a step in the right direction. It is hoped that this practical guide may be of use to the teacher and to the student, as well as to anyone working at home.

To the teacher I would say—when starting classes in Domestic Handicraft—it is well to keep in view the fact that the main object of such classes should be to awaken in the children those powers of which they are not yet conscious ; to foster in them a love of beauty and form ; and to make them realize that through the work of their hands it is possible to achieve results in practical Education as lasting in effect as those achieved in other spheres.

Work of this kind will be found very stimulating, and, once started in the right groove, the child's intelligence, and its creative power, of which it is still perhaps entirely unconscious, will grow rapidly and eagerly, always seeking fresh fields for the development of its growing powers.

The student, whether child or adult, and especially girl students, should realize that they are now being given a wonderful opportunity. Hitherto, practical instruction was not considered necessary for them in its relation to the arts and crafts ; but now, fortunately, it is included in most syllabuses, and is becoming more and more a part of their general education.

Some students may feel that they have not the power of doing original work, but, even if they are forced to copy what others have done, the very fact of this is bound to encourage and help to develop their own powers of expression along similar lines.

The enterprising worker in her own home should look upon work of this kind as a means, first, of economy, then of creative usefulness. It affords the possibility of beautifying the home, which we should all desire to do, and provides through work a pastime which will tend to make us all better and more useful citizens.

DOMESTIC HANDICRAFTS

CHAPTER I.

CHOICE AND CARE OF TOOLS—MAKING A TOOL BOX.

THE tools which are given in the following list are simply suggestions of useful tools which are necessary for the amateur. Many more may be bought, and, as experience grows, their necessity will be felt; but to commence the work, a few good, simple tools are sufficient.

In choosing tools, it must be realized that a good price should be paid for them. Cheap tools are generally useless and do not last. Also avoid what one might call "a nice little tool"; hard work will soon show its weak points.

Such things as chisels, screw-drivers, and gimlets should all have the metal portion firmly fastened into the handle. A hammer should have two tangs of metal running down a portion of the handle; this makes the head secure, and there is no fear of its "flying," as in the case of a hammer which has the head fixed on by means of a nail or screw. This tool should be chosen of medium weight, and evenly balanced.

Pliers, with wire cutters attached, are useful. A cold chisel is a great convenience for splitting packing cases, or for making holes in brick or plaster walls.

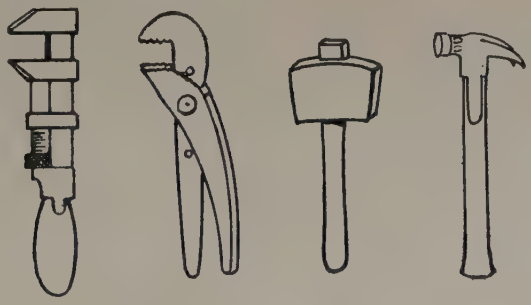

FIG. 1.
ADJUSTABLE SPANNER. PLIERS. MALLET. HAMMER.

Tools for the Tool Box.

Tack lifter	Hack knife	Foot rule
Three chisels, ¼", ½", 1"	Putty knife	Stripping chisel
Two screw-drivers	Wooden mallet	Two hammers
Two gimlets	Cold chisel	File
Hand saw	Adjustable spanner	Awl
Tenon saw	Plane (smoothing)	Bit and brace
Keyhole saw	Oilstone	Glue-pot
Pliers	Set square	Corner mitre

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Tool Box.

For anyone starting Domestic Handicraft classes, it is advisable when possible, to have a carpenter's bench, with a vice attached. The cost of this, complete with vice, will be about £4 10s., and one with a tool box underneath will be found especially convenient. Failing a proper bench, procure a strong, well-made deal table; and then it will be necessary to make one's own tool box. This is essential for the proper care of tools.

To Make the Tool Box.

Get a strong wooden box, scrub it, and affix a pair of 1½ in. hinges to hold the lid, and also a fixture in front for a padlock.

Sandpaper the outside of the box until smooth, and stain a good colour, using water stain. This is made from 2 oz. of Vandyke crystals, dissolved in 1 pt. of hot water. Allow the stain to cool, and apply two or three coats until the required colour is obtained, allowing the coats to dry in succession.

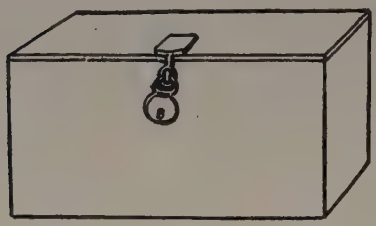


Fig. 2.
Tool Box.

Then take sufficient green baize to line the box, cutting it to fit exactly, allowing no turnings. Make slots by sewing on a strip of baize or tape, leaving portions of sizes to take the various tools, such as a chisel, etc. This will ensure their staying firmly in place, so that the points are not likely to get damaged when the box is moved. Now put a small amount of Tenasitine or Croid along the edges of the baize and press these pieces in position in the box, seeing that they stick firmly. The lid may also be lined. Rub the outside of the box with a little linseed oil: this will give a better finish to the wood. Varnishing is hardly necessary on a box of this kind. The box is now ready to hold all tools except the saw. Of course, a box of this size is intended only for a few tools, and these of the simplest.

If a good-sized cupboard is available, a shelf in this may be used for storing tools. Take a double piece of baize, the size of the shelf; prepare with slots as for the box. Nail the under piece of baize to the shelf, insert the tools in their places, and turn the top piece over the tools to keep them covered.

Care of Tools.

Tools of all kinds should be kept exclusively for the purpose for which they are intended. Explain their uses carefully to the

workers, and so avoid such crimes as using a chisel to remove obstinate tacks, or as a screw-driver. Chisels and planing blades should be kept sharp by rubbing on the oilstone ; saws should be re-set when necessary. Any tool not in constant use should be covered with a thin coat of vaseline, and put away in its proper place.

All tools should be kept under lock and key, so that they may not be used by inexperienced and unauthorized persons.

CHAPTER II.

KNIFE BOARD : KNIFE BOX : POT STAND : WOODEN STANDS : MEAT SAFE : VEGETABLE MASHER : LAUNDRY FRAME.

NOWADAYS, patent knife machines are very much used. They are comparatively cheap to buy, and they save labour and time. Some people, however, still prefer the old-fashioned knife board, covered with a piece of leather ; and, in the event of this wearing out, the following methods are simple and effective ways of replacing it.

Choose a piece of wood the width of the longest knife that will need cleaning, and 1 in. in depth. On this piece of wood may be nailed some cork inlaid linoleum or a strip of leather. The linoleum should be cut to the exact size of the board. The leather, being softer and thinner, can to advantage be carried on to the back of the board, where it should be nailed securely.

Another method shows the use of a piece of carpet, a hard loop pile being the best for this purpose. A piece of this kind of carpet should be cut to twice the width of the board. If it has been lying by, wash it and dry thoroughly, then fold it in half width-ways and lay it on the board. Tack the under fold to the board at both ends, and along the folded edge, using only sufficient tacks to hold it firmly in place. The upper fold is then turned over so that it forms a flap.

The knife powder should be sprinkled on the fold of carpet fastened to the board, and the knives to be cleaned are then put between the two folds and rubbed up and down. When extra pressure is wanted, the left hand should be put on the upper fold of carpet, pressing the knife with the carpet between the fingers and the blade, an absolutely safe method, and one to be advocated rather than the dangerous way in which people sometimes press the blade down with the fingers.

A KNIFE BOX.

Knives should always be kept in a box specially set aside for this purpose. The box should be lined with some soft material: green baize is generally used.

A knife box can easily be made at home with success and little expense in the following way : choose a firm wooden box, sufficiently long to take a carving knife and bread knife, and 5 in. or 6 in. deep. This should be scrubbed and, when dry, sandpapered until the surface is smooth inside and out. Take a piece of wood

slightly shorter than the box, and at least 2 in. higher; cut it with a keyhole saw, following a curved line. Next cut out from the centre the piece which will form the handle.

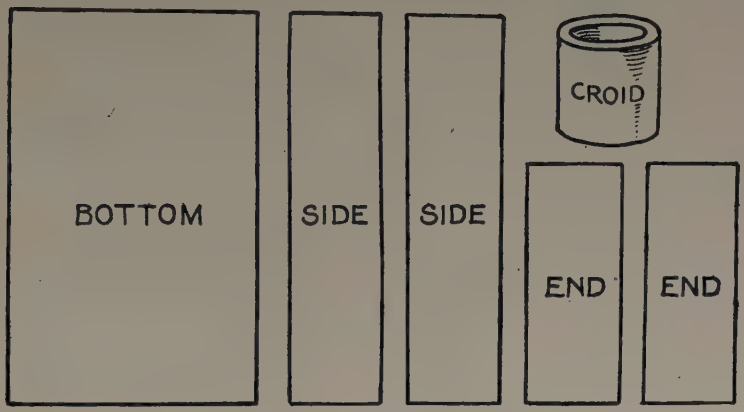


FIG. 3.
SECTIONS FOR LINING KNIFE BOX.

To remove this centre piece, make a pencil drawing to the required shape and, tapping the chisel lightly with the mallet, make an edge all round the line. By a series of gradual cuts in

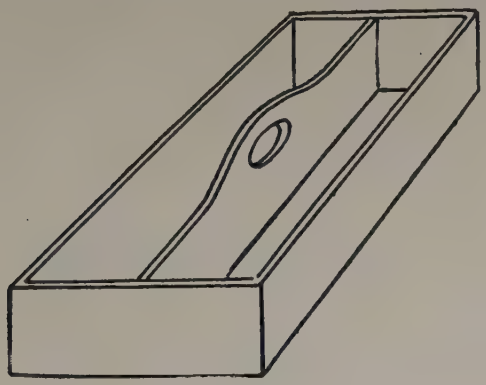


FIG. 4.
FINISHED KNIFE BOX.

this way, the centre piece can be removed, and the chisel may be driven gently through the depth of the wood, making sufficient opening to insert the keyhole saw; then carefully saw the centre out.

The handle must next be rubbed down with sandpaper until absolutely smooth, and, if the sawing has not been very good, much can be done with the sandpaper to improve the shape.

The handle must now be fixed into the box, and glue will be found the best means of fastening it. It should fit tightly, even before the glue is applied—then there will be no trouble.

Put a small amount of glue on the ends of the piece which will form the division; put this into the box and avoid lifting it until it is quite firmly fixed. The box will need to be lined; use green baize for this, cutting the pieces to the exact size of the wood they are to cover, leaving no turnings. The bottom, ends, side, and the sides of the division will all need pieces cut to fit, and these should be fixed in place with Croid.

When the box is lined, it should be stained with the vandyke stain described in the chapter on "Staining Wood." Two coats will probably give the required tone, and the box may then be varnished, or merely finished by rubbing with linseed oil: this brings up the grain of the wood, and gives a richness of tone to the stain.

Pot Stand.

To make a simple pot stand, take two pieces of wood, 6 in. long and 1 in. deep. Draw a line down the side of each, dividing it exactly in half. Then, in the centre of the top of each piece, draw a line, and two lines $\frac{1}{2}$ in. on each side of centre line.

Cut out this portion in each piece of wood to the depth of the line originally drawn down the side; place these two cut pieces one on top of the other. If they have been accurately cut and measured, they should fit tightly the one into the other, making a cross something the shape of a Maltese cross.

CENTRE WOODEN STANDS FOR USE ON STONE FLOORS.

Stands made of wood for use in front of the kitchen sink, or to raise a flour bin from the floor or a dustbin from concrete, and to allow a current of air to pass underneath, may be easily made at home.

A packing case, split up, gives wood of suitable lengths; or odd pieces may be bought from a carpenter for small cost. The lengths should first be sawn to the size required, and then planed until quite smooth.

Two lengths must be used as a foundation, and the number put on top of these to form the stand will depend on the purpose for which it is intended.

When the wood is prepared, the two wider pieces should be laid in straight lines at equal distances apart, and then the top pieces

screwed to these ; into each top piece two screws should be put, of sufficient length to grip the foundation securely. The wood in this case should be left plain, so that it may be scrubbed when necessary.

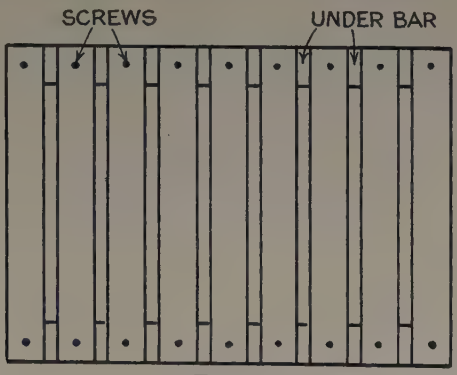


FIG. 5.
FLOOR STAND.

MEAT SAFE MADE FROM A TATE SUGAR BOX.

A meat safe made from a Tate sugar box can be made at home very inexpensively.

Once the box is obtained (they can generally be bought at the grocer's), the only other things necessary will be—

Two hinges ;
Wire gauze ;
Nails ;
Catch to hold the door.

Remove all unnecessary nails, and smooth the wood with a coarse sandpaper. To sandpaper large surfaces like this, it will be found easiest to fold a piece of sandpaper round a block of wood or small box, and, holding it firmly, to rub the wood the way of the grain. In this way much greater leverage is obtained, and the job is finished more quickly.

One of the original sides of the box will now become the bottom, and the lid will be made into the door.

A portion of the sides must now be cut away. Measuring about 3 in. down from the edge, mark a line all round, and saw away the centre part, leaving the 3 in. edge to which the wire gauze, used for ventilation, will be fixed. Pieces of wood about $1\frac{1}{2}$ in. deep should be nailed across the sides on the inner side to form supports for the laths which comprise the shelf. The latter should be planed until they are light and thin, and of such a length that, when laid on the support, they fit securely.

The lid, which forms the door, should be fixed with two hinges to the safe, and have the catch put in place on the left-hand side.

If preferred, wire gauze may be put into the door in the same way as the side; this, of course, allows a greater current of air and makes a more successful article of furniture.

Vegetable Masher.

To make a vegetable masher, take a piece of wood 1½ in. in depth, and mark a circle on it 5 in. in diameter. Cut it out, following the line of the circle, with a bow saw, and then rub it down with sandpaper until the surface is quite smooth, and the edges are even.

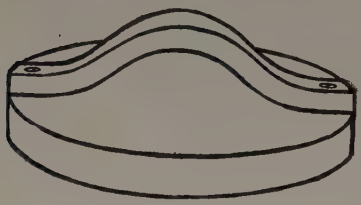


Fig. 6.
Vegetable Masher.

The handle should be cut next. For this, choose a piece of wood of the same depth as the base itself, and mark on the shape. (See Fig. 6.) Cut this, again using the bow saw. The handle should be fixed to the base by means of two screws, fixed at the edges of the top of the handle. Holes must first be made with a bradawl, and then screws inserted in these holes, fixing the handle firmly to the base. When in place, the handle also should be well sandpapered.

FRAME FOR DRYING SILK AND WOOLLEN ARTICLES.

The frame here described is very useful in home laundrywork for drying articles which need particular care to preserve the proper shape. It is simple to make, and could be made either at home, or in the handicraft class.

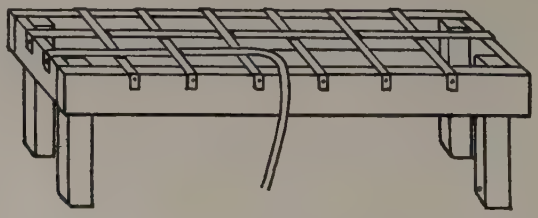


Fig. 7.
Frame for Laundry Work, Showing Threading of Tape Unfinished.

To make the frame, four pieces of wood to form the sides will be necessary, and four to form the legs; also sufficient tape—1½ in. to 2 in. wide—to make an interlaced covering, going across the top.

The frame can be made to any size required, but the suggested lengths will be found suitable for everyday use.

Take two pieces of wood 36 in. long and 5 in. high, to form the sides ; and two pieces 20 in. long and 5 in. high, to form the ends. This wood should not be more than $\frac{1}{2}$ in. thick, otherwise the frame is heavy and unwieldy.

Now cut four pieces of wood $1\frac{1}{2}$ in. square and 8 in. high, to form the legs. All the wood should be rubbed down with sandpaper and made perfectly smooth.

Nail the sides and ends securely to the legs, using headless copper nails ; these will sink into the wood and not protrude above the surface ; also they will not rust.

Now that the frame is actually made, the tape must be put on next. The strands should be spaced 4 in. apart, going from side to side, and 4 in. apart going from end to end. Those going from end to end should be put on last, and interlaced alternately under and over the strands going from side to side.

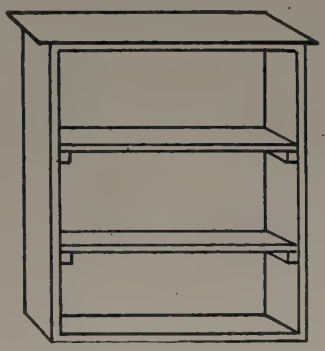


FIG. 8.
BOOT CUPBOARD FROM TATE SUGAR BOX.

Fasten the tape to the woodwork by means of copper tacks.

A frame of this kind should not be stained, but, if enamelled white, will last very much longer, and will be easier to keep clean.

CHAPTER III.

UTENSILS FROM OLD TINS: SOLDERING.

A CONSIDERABLE amount of expense can be saved by the housewife through the collection of old tins and by the adoption of some of the following suggestions—

Cylindrical tins of gill, half pint, pint and quart measures make useful dredgers for kitchen use: sugar or flour scoops, etc.

Various sizes can be collected, corresponding to the liquid measures required; all that is necessary is to fix a handle. Cut a piece of tin to the width required, bend it into shape, and solder to the tin.

For dredgers, choose tins of convenient size. Pierce holes in the lid of the tin. Use for flour, sugar, whitening, home-made "Vim," etc.

To make sugar or flour scoops, cut the tin to the shape required with shears. Then cut out a handle and solder in position.

Tin lids can be transformed into patty-pan tins, cutters for cakes, flan rings, and small baking sheets (7 lb. biscuit tin).

Square or oblong biscuit tins make good sink baskets or colanders. Pierce holes in bottom and sides of the tin.

A large Glaxo tin becomes a steamer when holes are punched in the bottom of the tin in rings 1 in. from the edge of the tin, and each 1 in. apart; for convenience, a handle could be soldered to the lid.

A 7 lb. biscuit tin makes an excellent oven for a Primus stove, or for use on a gas ring.

Syrup tins are very useful for hay-box cookery, on account of their tight-fitting lids.

SOLDERING.

It is quite possible to keep kettles and various tin utensils in good repair at home with a little practice in the use of a soldering bit. In this chapter the use of "soft" solder only will be taken, and in explanation of its name it may be said that it melts at a very low temperature.

To do a job of soldering, it is necessary to have the following equipment: a soldering bit—in other words, a heavy piece of copper attached to a wooden handle (this tool is pointed at the end and has four flat sides, or facets); a tin of Fluxite (a commercial ready-made flux); a stick of solder, usually made of one part lead and one part tin.

It must be remembered that absolute cleanliness is essential; therefore, first clean the joints or hole to be repaired, scraping

with an old knife, or, if very uneven, file down until quite smooth; rubbing with coarse emery paper will also be found effective.

When the utensil to be repaired is clean and ready, the next thing to do is to tin the copper bit.

At first sight the bit will look dull and dirty; this is caused by the film of oxide which forms very rapidly when the copper comes in contact with the air.

Heat the bit in a gas jet to a dull red; file it on all four facets quickly to remove the oxide, and then dip it in the Fluxite or killed spirits (chloride of zinc) and, after this, rub with a stick of solder. The bit being hot, the tin should run easily over the surfaces, and give a thin coating of tin to the copper.

The place to be repaired having been previously cleaned, hold the bit in the right hand and, drawing it lightly across the end of the solder stick, allow this to run on to the hole. At first it will be found difficult, and the solder will probably run anywhere but over the hole; with practice, however, one can pick up the pieces of solder and, with gentle pressure of the warm bit, get a smooth surface over the part to be repaired.

Fig. 9.
Soldering Bit.

Another thing for the beginner to avoid is getting too much solder on the utensil to be repaired. This results in a bumpy, uneven surface, which it is impossible to get smooth.

Another means of repairing, if the hole is large, is to cut a piece of sheet tin slightly larger than the hole; trim the edges; clean all round the hole to be repaired; coat the under side of the patch and edges with spirits, and then solder it on. Try as far as possible to get the solder underneath only, and not on top of the patch.

Another method of repairing without the use of solder may be given here, and this is by the use of rounds of tin with cork between, held together by means of a screw and nut. These may be bought for a few pence at any ironmonger's. To use, clean the hole and enlarge sufficiently to allow the screw to pass through easily. Remove one of the small tin plates and the cork; then put the screw through the hole, fixing the cork next the hole on the inside of the vessel. The second piece of tin and the cork should be fixed on to the screw after the screw has been passed through the hole; then attach the nut, tightening this up as much as possible. Cover the patch with cold water to allow the cork to swell, and, after a short time, if the screw is tight enough, the leak should cease.

CHAPTER IV.

RENEWING WASHERS ON TAPS: SIMPLE REPAIRS TO LOCKS AND HANDLES.

DURING the war it was very useful to be able to put washers on taps, because it was an expensive job if a man was called in to do it; and although now, in many areas, the free repairing of taps is done by the Water Company's officials, it may be found useful to understand the method in case of emergency.

A new washer is necessary when water continues to pass through the taps unless they are screwed down very tightly.

Various Kinds of Washers.

Leather for cold water taps.
Rubber for cold water taps.
Red Rubber for hot water taps.
Composition for either hot or cold water.

These can be obtained at any good ironmonger's, or the leather washers may be cut at home, from piece leather such as is bought for repairing shoes.

Necessary Tools.

File. (To increase the size of the hole in the new washer, if necessary, and file away any roughness or burr.)

An adjustable wrench (to remove the top of the tap).

Screw-driver. Knife.

To Proceed with the Repairing of the Tap.

Turn off the water at the main, to stop the flow of water from the main pipes in the street to the house pipes. Next turn off water at the house cock, to stop the flow of water from the pipes into the cistern. Take careful note of the number of turns needed to stop water, so that the pressure may be regulated correctly when the work is finished.

To Measure the New Washer.

Press a piece of paper at the "flow" of the tap to get the impression of the right size; cut or buy washer according to this.

Turn on taps to empty pipes.

Fix wrench round the neck of the tap and unscrew; remove the spindle and the part with the washer attached. Take away the old washer, which is usually attached with a screw. Make the hole in the new washer to the correct size, using the tang of the file. Put on the washer with the glossy side downwards, and

replace the nut. Put back the head of the tap and screw into place with the wrench. Turn on the main cock.

Avoid turning off the tap too tightly; it simply grinds the washer and wears it away. When it is not possible to turn off the water at the main, get someone to invert a basin over the tap to regulate the flow of water, and work as quickly as possible on the lines already given.

If the tap leaks near the handle, unravel a small piece of string or tow, and put this into the stuffing box, screwing down tightly on it.

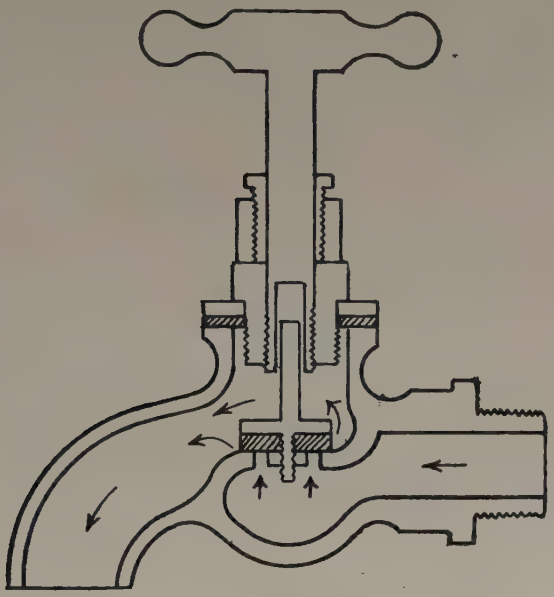


FIG. 10.
SECTIONAL VIEW OF TAP SHOWING POSITION OF WASHER.

SIMPLE REPAIRS TO LOCKS AND HANDLES.

When one realizes the constant use made of locks and door handles, it seems a wonder they do not get out of order more often; but when they do go wrong, they cause a great deal of discomfort, and generally a very simple repair is all that is necessary, such as the fitting of a new spring, or, it may be, only a thorough cleaning.

There is a great variety of locks, those in most general use being the rim lock and the mortise lock. A rim lock is screwed on to the door; a mortise lock is inserted into the middle rail of the door, showing only the door handles and keyhole. Rim locks are used where the styles and rails of doors are not sufficiently thick

to allow of the necessary cutting away for inserting a mortise lock. The mechanism of both locks is on the same principle. There is—

(1) The lock case.
(2) The bolt or lock.
(3) The lever or levers.
(4) The catch.
(5) The follower.
(6) The spring.
(7) Various pins.
(8) The cover, or face plate.

The " levers " are placed on the bolt ; the " catch " by the side of the bolt. The " follower " contains the part the " spindle " or bar of door handle passes through, also a " pin " for the catch. The spring is so placed on a " pin " that it acts on both bolt and catch.

The cover or face plate, which keeps all these various parts in position, is screwed on to the side of the lock that rests against the door. Then there is the box staple, which is fixed on to the jamb of the door, and receives the ends of the bolt and catch.

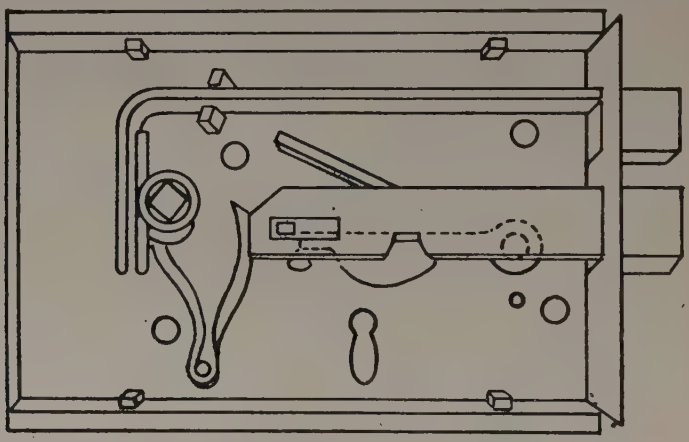


FIG. 11.—SECTIONAL VIEW OF RIM LOCK.

To Clean a Rim Lock.

Remove one handle and draw out the spindle. Loosen all screws. Then with a mallet give some sharp knocks on the door round the lock. This should crack the varnish or paint, which may have caused the lock to stick to the door. It may be necessary to loosen the lock by the aid of a screw-driver, in which case care should be taken not to damage the woodwork.

Place the lock on a table, remove the face plate ; take out the various parts. Should there be more than one lever in a lock, mark them as they are removed, so that they can be put back in the right position. If this precaution is not taken, a great deal of trouble may be caused in putting the lock together after cleaning. Soak the parts well in paraffin ; then wipe it off ; remove any rust with emery paper. Put the lock together again ; oil it lightly

with good machine oil, and screw it on to the door. Before tightening the screws, put the handle into position; insert the key. See that both are acting, then tighten the screws.

To Put In a New Spring.

Take the lock off the door; remove the face plate; take out the defective spring. A new spring can be bought for a couple of pence; get it of the same depth as the old one and as near as possible in size. Should the ends be too long, they can be cut to the required length with a file. Put the new spring into place; screw on the face plate and replace the lock.

A mortise lock can be cleaned or have a new spring put in in exactly the same way. When the necessary screws are removed, and the paint or varnish loosened round the visible part of the lock, a screw-driver can be inserted into the spindle carrier, and gentle pressure used to loosen the lock.

Fitting on a Rim Lock.

This is quite a simple job, should a lock be required on a garden shed or any other outhouse.

First decide where the lock is to be put. Mark round the lock. Cut away sufficient wood to let the bolt end of the lock fit flush with the door. Then hold the lock firmly in position and, with a sharp-pointed instrument, mark places for key and handle, should the latter be required.

To cut the keyhole, draw the size required on the door; bore a small hole through it. Insert the point of a keyhole saw and cut round by the drawing. The keyhole should be sufficiently large to allow the key to pass easily—not too large, or difficulty will be found in inserting the key into the lock. The hole for the handle is cut with a bit and brace. When the lock is fixed, put on the "box staple."

Door Handles.

Door handles are knobs of china or metal fixed on each end of a "spindle" which passes through the door and lock. This spindle has holes drilled at each end, and flat-headed screws, called "grub screws," are used to secure the knobs to the spindle. By means of the holes in the spindle, handles can be regulated to fit the door. It sometimes happens that the holes do not allow of accurate fitting; then small iron washers (just little flat rings of metal) should be put on the spindle to fill up the space between handle and door, or a loose handle is the result—and loose handles are both awkward and unsightly. They also cause friction, which in time wears away the wood round the spindle.

Some spindles are fashioned with "screw edges," thus enabling the handle to be screwed right up to the door, when there should be no need for washers.

CHAPTER V.

PUTTING IN A PANE OF GLASS: FROSTING GLASS: PROTECTION OF WALLS IN BATHROOM.

When a new pane of glass is needed, first measure where the new glass is to be inserted, getting the exact size, so that there is no fear of its working loose or needing an excessive amount of putty to hold it in place. If careful measurements are taken, the glass can be bought ready cut to the required size, and is usually sold one-eighth of an inch in thickness.

Tools and Materials Required.

Hack knife.	Hammer.	Glass.
Putty knife.	Putty.	

Preparation of Ledges for New Glass.

First remove all old glass and putty with a hack knife. This is essential: if old putty is left in, it gives an uneven surface to work on, and these hard irregular lumps may cause the new glass to break.

To use a hack knife, put the sharp edge against the putty to be removed, knocking gently with a hammer; chip out all old putty and glass, being careful not to damage the woodwork, or make the rebate of the window uneven.

Fill the rebate with soft new putty, using a glazing knife; this can easily be improvised by using an old dinner knife, one that does not bend being preferable.

Next, take the new pane of glass, and press it firmly and evenly, not more on one side than on another, into position. This should sink well into the putty, pressing it out at the back, and leaving only a thin layer between the wood and the glass. Now put a layer of putty all round the inside; then draw the putty knife along the edge, getting a neat straight line. Do not worry about removing any excess of putty. The pieces which stick to the glass may be brushed or dusted off afterwards, but should never be scraped away, as this is apt to scratch the glass and spoil the surface.

If the pane of glass to be inserted is very large, small brads or triangular pieces of zinc may be used to hold the glass in place. These should be pressed into the wood, close to the glass, and the inside layer of putty will cover them; two at each end and at each side will usually be found sufficient.

Frosting Glass.

It is often found necessary and convenient to frost glass which is in position, and this method is much cheaper than buying the proper ground glass. Magnesium sulphate, commonly known as Epsom salts, may be used, and gives a lasting result.

Warm a little beer, then dissolve in it as much Epsom salts as it will take, and add a little ordinary stationer's gum. Then, with a piece of flannel, dab this warm liquid all over the surface of the glass. As it dries, a frosted effect will be produced.

If put on a window likely to be opened frequently or scratched, a coating of gum water should be put on to form a protection.

Protecting Bathroom Walls.

For anyone who cannot afford to have expensive bevelled glass fixed in the bathroom behind the hand basin and bath, the following is given as a simple and economical suggestion—

Measure the amount of wall to be covered behind the basin. An average size would be 28″ × 18″. Procure a piece of glass of this size, and sufficient narrow beading in white enamel to go round it. Make the frame and mount the glass in it. Fix two holders in the sides of the frame, and fasten to the wall by this means.

When splashed, the glass can easily be washed, and will form a very effective protection to the wall.

The same method may be employed behind the bath, with a larger piece of glass and more beading.

Another method of protection against splashing is by means of thin enamelled tin or other sheet metal, which is procurable in a variety of coloured designs in imitation of tiles. The metal sheets are fixed to the wall by small tacks.

CHAPTER VI.

SETTING UP SPRINGS IN A CHAIR: FIXING CASTORS AND "DOMES": THE GLUE POT.

When the seat of any spring chair or Chesterfield begins to sag badly, people usually say "the springs are broken." This is not a correct expression, because the springs very rarely break. What has happened, however, is that the string which held the springs in position has snapped, or that the webbing has worn through from continual strain.

The re-webbing of a chair is a simple matter, sufficient webbing being needed to form a network of interlaced pieces over the bottom of the chair.

To find out the quantity required, measure the chair from the front to the back, allowing 3 in. of the frame between each strand, starting 2 in. from the leg; also measuring the same way from side to side, allowing 1 yd. over.

Webbing is sold by the piece—18 yds.—and in different widths, Nos. 10 and 12 denoting the widths of those generally used. It should be strong, closely woven, and $2\frac{1}{2}$ in. to 3 in. wide. Other materials required are as follows—

A ball of upholsterer's twine.

A box of "webbing tacks" $\frac{5}{8}$ in., with large heads.

The tools needed are the following—

A hammer. A tack-lifter.

A block of wood (about $5'' \times 3'' \times 1''$)—used for stretching the webbing.

A stripping chisel, if obtainable—a very useful tool for removing old tacks.

The springs are usually "gone" from the bottom; therefore, to set to work, turn the chair upside down, resting the front portion on a stool, or put the chair upside down on a table. Begin by removing the canvas or whatever material has been tacked on to cover the webbing. Then cut all the strings which are not already broken and remove all tacks fastening the webbing, as well as any old tacks which may previously have been left in the chair. The webbing will then come away quite easily, leaving the springs loose. (See Fig. 12.)

Before beginning to put on the new webbing, see that the springs are firmly sewn to the piece of canvas on which they rest.

To put on the new webbing, start 2 in. from one of the front legs; lay the end of the webbing $\frac{1}{2}$ in. beyond the chair frame, and tack just inside this, using two tacks. Turn back the $\frac{1}{2}$ in.

on to the piece of webbing, and tack again firmly in position, using three tacks. (See Fig. 13.)

After this, stretch the webbing across the chair from the front to the back rail, taking no notice of the springs. To allow of tight stretching, use the block of wood; fold the webbing round this, press just under the outside of the back rail; lower the hand holding the block, which acts as a lever and tightens the webbing.

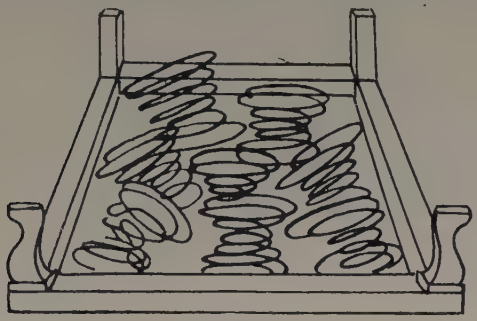


Fig. 12.

While still holding the block firmly with the left hand, with the right hand put in two tacks and drive them home, keeping the webbing in place. Cut the webbing again, allowing $\frac{1}{2}$ in., which is turned over and tacked a second time with three tacks. Leaving 3 in. of the chair frame between, put on the next piece of webbing;

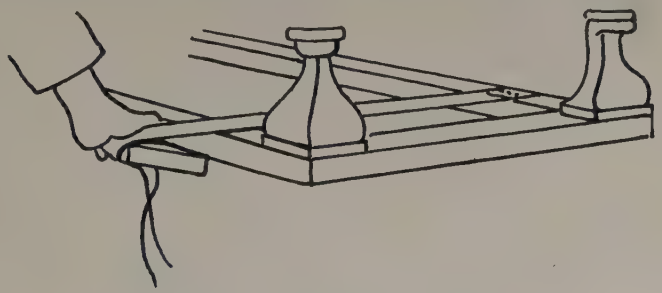


Fig. 13.

tack as before; stretch to the back rail again, and tack in place. Continue putting on the webbing in this way until there are enough strands. If the back of the chair is narrower than the front, it will be necessary to incline the strips toward the centre of the back.

Strips of webbing must now be interlaced from side to side, going over and under the front and back strips alternately. Start again 2 in. from leg of chair; tack webbing in position, lace under

and over, pull very firmly, and finish off as before on the opposite side of the chair.

When the bottom of the chair is thus covered with a neat network of webbing, force the springs under this, getting them into

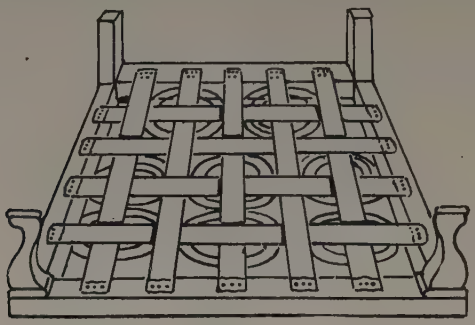


FIG. 14.

an upright position. If the webbing is really tight, it will be found difficult to get the springs underneath, but by slipping one wire at a time, it can be done fairly easily. When the springs are in position, they must be sewn firmly to the webbing in at least three places on each spring by means of an upholsterer's needle (curved) and upholsterer's twine; this latter costs 1s. 6d. to 2s. a ball, but it is worth the price because of its strength and lasting power. (See Fig. 14.)

When all are firmly fixed, tack a new piece of canvas on to cover the webbing and to keep dust from getting between the springs.

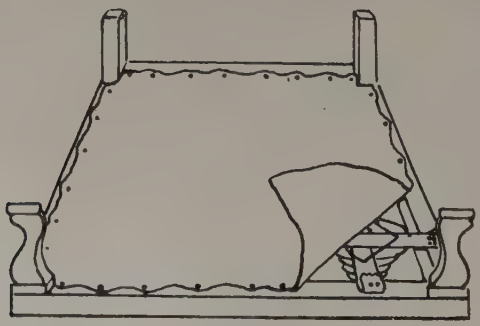


FIG. 15.

Cut canvas the size of the bottom of the chair, allowing $\frac{1}{2}$ in. turnings. Start tacking in centre front, finish the front row, and then go to the back rail, stretching canvas tightly. When front and back are finished, start on one side, lastly finishing on fourth

side. If the piece of canvas which was removed at the commencement of the job is in good condition, it may be washed and used again on the chair. (See Fig. 15.)

Fixing Castors and Domes.

Very often with the constant moving of the chair, the castors will work loose. These should be seen to at once, otherwise they will rapidly become worse, may break off, and will probably damage the furniture to which they are affixed. If ordinary screw castors have been used, tightening the screw will sometimes be sufficient, or, if the wood has worn inside, a longer screw may be needed; if this fails to fix it firmly, a screw which has still a coarser gauge should be used. What are known as "cup castors" are frequently used on furniture, and if they become loose, look to the screws at once. The castor is attached by three short screws, which grip into this portion of wood sunk in the cup of the castor; hence the name.

In a badly damaged chair, the castor may come off and also a piece of the leg of the chair. It will be necessary to have a new piece of wood "turned" to fit the castor. A hole must be bored

Three Kinds of Castors.

Fig. 16.

Screw Castor (1). Cup Castor. Screw Castor (2).

in the leg of the chair, and this piece of wood inserted with a "pin"; the castor can then be re-fixed.

Silent Domes.

Silent Domes—made in various sizes according to the size of the articles of furniture they are intended for—are a very effective means of keeping the legs of furniture from coming in contact with the floor. As their name implies, they move very easily, and many people consider they are preferable to the ordinary castor.

To Fix the Domes. There are always three small projections of metal on each dome, and all that is necessary is to make three small holes where they will meet the wood; then press the dome on to the wood and, to fix quite securely, knock into place with a mallet.

Revolving Domes.

These are made in several sizes, and are composed of a piece of rounded metal, which is enclosed in a flat plate, also made of metal, so that it revolves when the furniture to which it is fixed is moved. In the plate there are three or four holes, according to the size of the dome, and the screws are put through these to fix the dome to the furniture.

Simple Repairs.

Sometimes, through careless handling, small pieces of furniture get chipped, or a castor works loose and brings away part of the chair leg with it. All these chips should be carefully kept, and fixed in position again with glue.

The Glue Pot.

The glue pot is a very necessary item in the smallest collection of tools. Inexperienced people are far too inclined to put in nails or screws to effect repairs, instead of using glue. A glue pot is made of two parts: the outer, which holds the water; and the inner, which holds the glue.

"Scotch glue"—as it is called—is the best; when buying, choose the clear and transparent variety.

To use glue, break it into small pieces and soak over night in just enough water to cover. Then half fill the outer vessel with water, and allow this to boil until the glue in the inner vessel is dissolved. It should be stirred from time to time, and, when ready, it should be of the consistency of thick cream.

All surfaces to be glued should be clean and smooth; also it is well to heat the wood first, as this keeps the glue from congealing too quickly. Once the glue is put on, they should be pressed firmly together and tied in several places with tape, and left for twenty-four hours before use.

Cold Glues.

There are many glues on the market that are ready for use without boiling. It is an advantage to have a small stock always at hand. Le Page's Glue, Tenasitine, Croid, and Gluak are four that can be recommended.

CHAPTER VII.

CANING.

RE-SEATING a cane-bottomed chair is a simple and useful job to be able to deal with. Done by professionals, it does not cost much nowadays, but these people rarely go to the trouble of doing what is known as "true caning," and sometimes will finish a chair with as few as four strands, whereas the correct pattern should have six at least, and seven if the seat is finished with beading.

Cane—Where Bought, and Quality.

Cane may be obtained from Miss Firth, Berners Street, London, W.; and is sold by the pound, the price being according to the quality. It is sold by numbers, "O" being the finest, and the numbers go up according to the width of the cane. It should have a smooth, glossy surface, free from any cracks and flaws.

Tools Required.

The tools necessary are few; a caning needle may be used, but it is not necessary. It is essential, however, to have an awl, stiletto, gimlet, and some wooden pegs, and scissors or knife.

If the seat is badly broken, it will prove more satisfactory to remove all old cane, cutting round with the scissors; then clear all the holes in the woodwork, removing all the short pieces of cane, pegs, dirt, etc. This takes some time, but is necessary, as the holes must be left quite free before fresh caning is started.

In most chairs the shape of the seat will be irregular, that is to say, the front will be wider than the back; and unless this is taken careful note of, mistakes will be made, because, *in caning, all strands must be parallel,* and equal distance apart.

We will suppose the seat has been freed of all old cane and that the holes are clear right through.

First, soak the cane for a few minutes in warm water—longer, if in cold—but never soak too long, as this spoils the cane. For the amateur, it will be found easier to work with short strands, pegging in each hole; or continuous strands may be used, as in the method given here.

With the chair facing the worker, find the centre hole of the back rail, draw the cane carefully through and, leaving about $\frac{1}{2}$ in. on the under side, fasten off with a peg on top. (See Fig. 17.) The glossy side of the cane must be uppermost, and it should be run through the finger and thumb to prevent twisting. Pull the strand moderately tight, and draw it down through the centre hole on the front

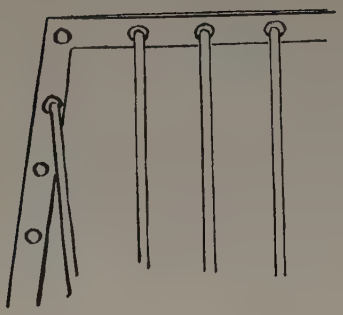


FIG. 17.

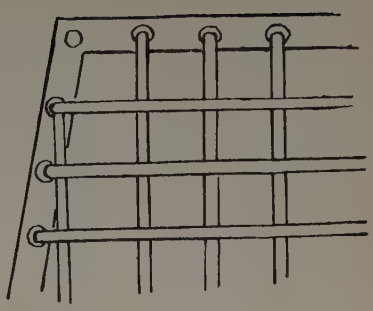


FIG. 18.

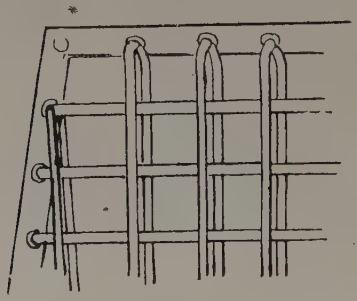


FIG. 19.

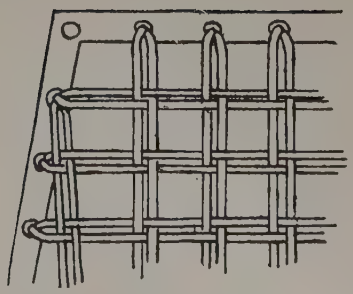


FIG. 20.

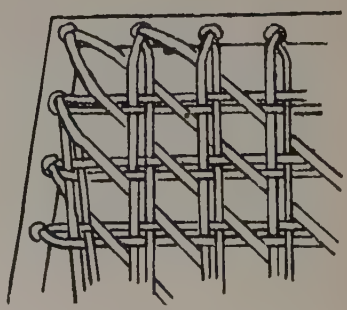


FIG. 21.

rail; come up through the hole next to the centre one, and draw this cane again to the back row, being careful that the glossy side of the cane is "out" on the under side of the frame, as well as on the top.

This is repeated until all holes on the front and back rails have been filled, with the exception of the hole next the corner on the front rail, and the corner holes.

Now start on the other two rails. Begin again in the centre, and work backwards and forwards until all holes are filled with the exception of the corner holes. (See Fig. 18.)

The third strand is simply a repetition of the first. (See Fig. 19.)

These simple steps are now completed and, with the fourth, the actual weaving of the pattern begins. (See Fig. 20.)

Start at the hole next the corner one on the side rail, and interlace the strands, going over the first and under the third, working from side to side of the chair. This is really pairing the strands,

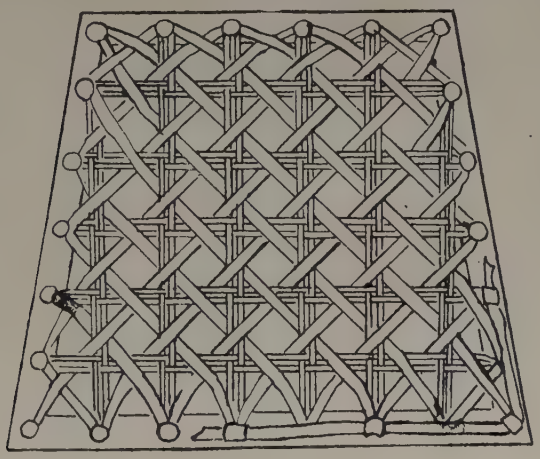


FIG. 22.

and should form small open squares. If necessary, sponge the woven cane to make it pliable enough to be forced together, so that the strands lie closely, side by side.

Fifth Strand. Next comes the weaving of the diagonal lines. Start in any corner of the frame and go underneath the strands from the back to the front rail, and over the strands from the side rails, continuing a diagonal line until the other corner is reached. Come up in the next hole and carry the cane back again, going over and under the succeeding strands until the first row of

diagonals is complete. To make a true diagonal line, it may sometimes be found necessary to have two strands, starting or ending in the same hole. (See Fig. 21.)

The sixth step is a repetition of the fifth, the strands running at right angles to the first diagonals, and thus completing six strands.

At this stage the seat may be finished off with what is called "beading" (sometimes known as the seventh step in caning) if this is thought desirable. (See Fig. 22.)

If, during the caning, continuous strands have been used, almost no pegging will be necessary; but, otherwise, they must be secured in every hole by small pieces of cane, such as is used in basket-work. These are cut to $\frac{1}{4}''$–$\frac{1}{2}''$ in length, according to depth of the framework, and are driven into each hole one-eighth of an inch below the wooden surface of the chair. This is now considered the more fashionable way to finish the work; but if beading is desired, the pegging should be put in, every third hole being left free.

Choose coarse cane, wider than that used for the actual caning, and bring a long strand of this up through one of the corner holes, laying it over the pegged holes. When the free hole is reached, bring through this a piece of fine cane, going up and down in the same hole, thus holding the beading or binding firmly in place. Continue this process all round the seat. When the corner is reached again, take the cane through and knot firmly.

The work is now finished, unless the re-seated chair is mahogany or dark oak; if made of a dark wood, it will look far better if the cane is coloured to match the wood, and it is essential for this to be done in the case of renovating old furniture. A quick-drying stain, such as Jackson's Varnish, suitable for a non-absorbent surface, should be used. Rub this over the cane with a piece of rag, being careful to get an even surface. Two coats should be sufficient to tone with the colour of the woodwork.

CHAPTER VIII.

RUSH SEATING FOR CHAIRS, STOOLS, ETC.: RUSH MATS.

Rush, as a means of finishing the seats of chairs, etc., dates from the early eighteenth century in England. In these earlier days, it was employed simply for utility, and was not often found on the better types of furniture; however, the more modern idea combines beauty with usefulness, and rush seats are now found on furniture of very good designs.

Where Obtained.

Fresh water rush, which is the correct kind for seats of chairs, etc., dried and tied into bundles, ready for use, may be bought from Miss Firth, Berners Street, London, W.

In country districts, the children could be encouraged to pick the rushes for themselves, and dry them ready for future use. The correct time for picking is when the blossom is full on the plant, the leaves still green, though turning brown at the tip—usually the middle of August.

Amount Required.

One bundle of rush should be sufficient to rush two medium-

Fig. 23.

sized chairs; this and the stuffing stick, as shown in Fig. 23, are all that are required for a chair.

Preparation of Rush.

The rush should be soaked for about 10 hours in water; if put into warm water, it will take a shorter time.

Preparation of Chair.

The chair, if to be re-rushed, must be stripped of all the old rush, and any nails removed from the framework. If the chair to be rushed is what is known as irregular in shape, i.e. the back rail narrower than the front rail (see diagram), it will be necessary to commence weaving on the front and side rails only, until a square is formed.

The frame should be measured, and from 2″–3″ marked off on the front and side rails, which, when filled, will leave a square on which the remainder of the weaving will be done.

Weaving Process.

Cut off about 1 ft. of the thin end of the rush (i.e. the end with the blossom). The leaf or leaves are now twisted into a strand. Tie the leaf or leaves to the back rail of the chair and draw tightly in a straight line to the front rail. The portion passing over the centre of the chair need not be twisted, but that portion which goes over the front and side rails must be twisted.

Weave by this method until the extra 2 or 3 in. causing the irregular shape are filled, the rushes being fastened to the back rail on the right and left sides [*B* and *A*] respectively. It is

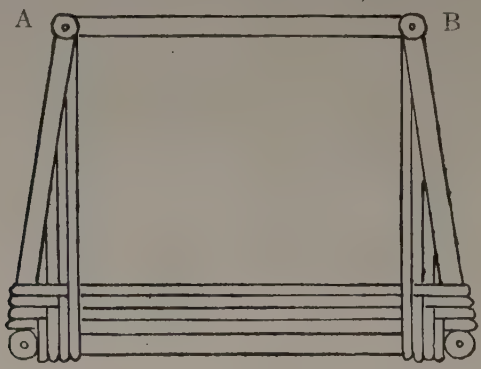


FIG. 24.

necessary that the leaves should be evenly twisted, and each succeeding strand must lie closely against the preceding one. To ensure an even surface, a wooden mallet may be used to knock the strands gently into place; they should be drawn fairly tight, and allowance should be made for shrinking as they dry.

Now, the centre of the seat still to be woven should be a square, and, when this is obtained, the strands of twisted leaves may be continued round all four sides of the frame. (Fig. 24.)

To join on a new strand, there are two methods: either by twisting the new and the old strands together, or by knotting the two neatly. It would be well for the beginner to avoid twisting, and to use the knotting method, as it is quite secure, and the knots can be arranged not to show underneath. Strands of 3 to 4 ft. in length should be used.

Stuffing.

When this weaving has been carried out until half the seat is filled, the stuffing should be started. This is done by means of

the blunt-ended wooden tool (stuffing stick), small bundles being used, made up from the pieces which were originally cut off from the ends of the leaves. The shape of the seat is much improved by stuffing. This should raise the seat evenly at the four corners, allowing it to slant towards the centre. Rush-seated chairs are

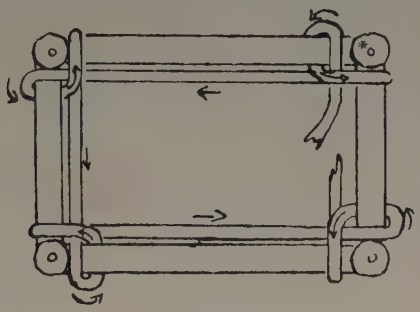


FIG. 25.

sometimes stuffed with hay, but the ends of the leaves themselves will be found best, and they also offer more resistance to wear.

When the weaving has been continued until the seat is about three-quarters full, it will probably be found that the two opposite rails are full, so this will necessitate the weaving being continued on two rails only, until the seat is complete. It should be finished

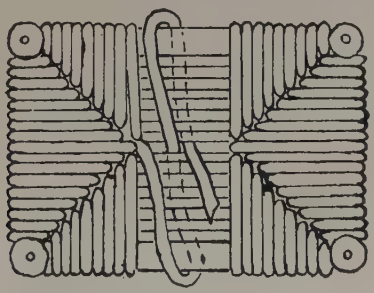


FIG. 26.

in the centre, the last strand being drawn underneath and finished off neatly.

It may be noticed that the seat, when drying, produces mildew on the surface of the rush. This is caused by the rush drying, and should be rubbed away with a duster; as the rush dries, the mildew will gradually disappear.

The whole seat may be finished by varnishing. Two coats of a clear, quick-drying varnish should be used; this tends to preserve the rush.

Sometimes there are thin pieces of wood attached to the sides of the seat, and they should be carefully replaced and fastened by means of headless nails driven through the wood, rush, and wooden frame of seat. Any holes caused by these nails should be filled up with furniture stopping, made by mixing four parts beeswax, one part whitening, and adding colouring—yellow ochre and Indian red—until the required shade is obtained. This stopping may be kept in a tin and heated when required. To fill the holes, press in the stuffing until it is above the surface. When dry and hard, this should be rubbed smooth with glass paper.

If the framework is of dark wood, it may be found necessary to re-stain and varnish these side pieces.

Other Ways of Finishing Stools, etc., Instead of Using Rush.

Seats may be woven, plaited raffia being used, or even grass rope. Comfortable, durable seats are made in this way by the same method of weaving as described for rushing.

Rush Mats.

Mats for either sitting-room or bathroom floors are inexpensive and artistic articles which may be made at home at small cost.

Materials Required.

Bundles of plaited Rush—natural and coloured.
Fine string, for sewing.
A strong needle.

The mat may be made round, oval, or square. When the shape has been decided upon, the first thing to do is to neaten and secure the end of the rush. This should be done by binding with string.

Start at the centre of the mat, and, laying the plaited strands of rush closely together, sew them securely in position. The sewing should be done from the wrong side, with small stitches, which, as far as possible, should be invisible.

Work the strands gradually outwards, following the desired shape, and keeping the whole surface as flat as possible. From time to time the worker should place the work on the floor, to see that the flat effect is being retained.

Very effective coloured designs may be worked in the centre—rounds, squares, or triangular shaped pieces—or the colours may be worked in to form a border round the outer edges.

If a large mat is being made with many colours, the separate portions may be sewn separately first, and then joined together later, when sufficient strands have been sewn to form the entire mat.

The natural and coloured rush may be bought in bundles.

CHAPTER IX.

PICTURE MOUNTING BY PASSE-PARTOUT—HINTS ON PICTURE HANGING.

In these days, when reproductions of famous pictures can be obtained so cheaply, it is well to be able to mount them, to make them last longer by protecting from dust and dirt. In this way, children may be taught to value their possessions and to carry out simple decorative schemes for their own rooms.

A framing of *passe-partout* is very suitable for this; and, with practice, excellent results can be obtained. A *passe-partout* outfit can be bought for 10s. 6d., which gives various tools and suggestions for good work.

Bought separately, the binding may be obtained in many different widths and colours, with either dull or shiny surface in

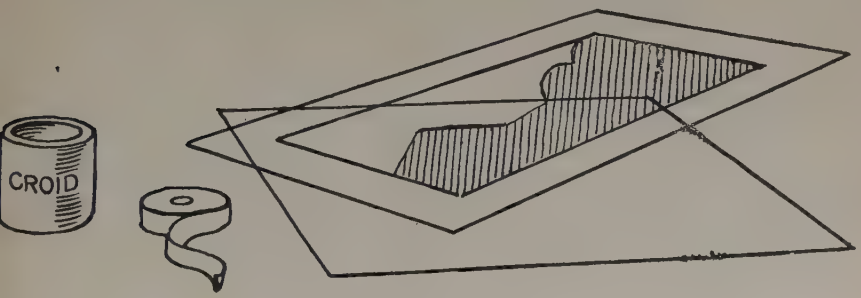


Fig. 27.

paper or leather, and can be chosen to tone well with the picture. A piece of glass of the size of the print, two rings for fastening cord, and a piece of thin cardboard for backing will be needed; also, if the picture is flimsy, a thin piece of drawing paper may be inserted between the picture and cardboard backing. Sometimes, if the print is very small, glass and cardboard larger than the print make the mounting very effective.

It is best to fasten the print to the cardboard by means of gum along the top edge, so that the picture thus hangs freely; also a black line, drawn in Indian ink, one-eighth of an inch round the print, is effective. The print may be placed at almost any distance from the top, bottom, or side of the mount, according to individual taste.

The binding is used to keep the glass, the mounted picture, and the cardboard backing together.

First insert the rings in the cardboard at equal distances from the top—2½ to 3 in.—then clean the glass thoroughly. Always try to get thin glass, as a better result is obtained when binding.

Next, cut strips of *passe-partout* to the length of the top, bottom, and sides of the glass, allowing 1 in. over on each strip. Crease the binding in a straight line, so that the narrow strip will be on the outside. Moisten the gummed side of the binding and lay the glass on this, being very careful to get the line absolutely straight.

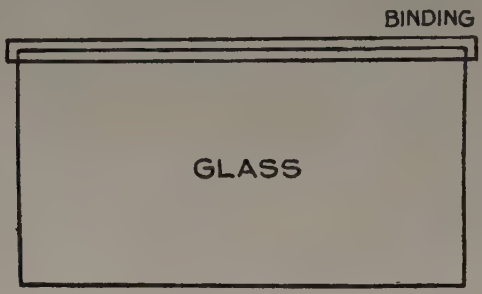


Fig. 28.

With a clean duster, press the binding firmly on; finish the top and bottom of picture first, and then the sides. The ends of the top and bottom should be arranged to cover the corners completely, and the strips which cover the sides should have mitred corners, finishing sharply at the corner of the glass, the sides being the topmost pieces in finishing.

Lay the glass on the table, outside down, and next put the picture, mount, and cardboard on to it; get these all absolutely straight and, holding firmly with the left hand, moisten the centre part of each strip, sides and top, and turn this over on to the cardboard, pressing firmly. These will hold the picture in position; it can then be picked up to have the corners finished neatly. Lastly, polish the outside of the glass to remove finger-marks.

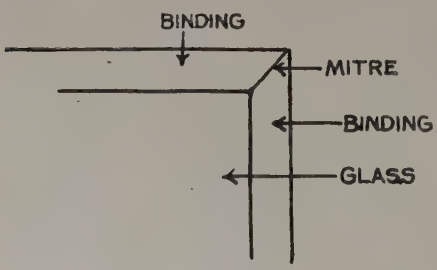


Fig. 29.

It may be found easier, when the pieces of binding have been fastened on top and bottom of the picture, to tie the glass, picture and cardboard from side to side, then to finish off the binding at top and bottom, fastening it to the cardboard.

Next, tie the picture, glass and mount from top to bottom and finish the sides.

Hints on Hanging Pictures.

When hanging pictures, it is necessary to remember that they are hung to be looked at; and, for this reason, should be a moderate distance from the picture rail and on a level with the eyes, or even below this—4 ft. from the ground is usual. Heavy pictures should have either brass chains, or two strands of copper wire attached to the picture frame by rings, and to the picture

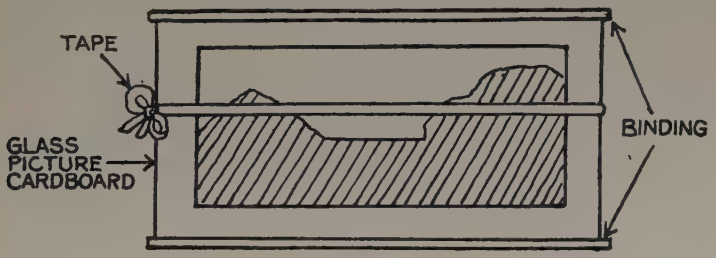


Fig. 30.

rail by hooks arranged so that the picture hangs flat against the wall, or with a very slight incline forwards. Do not allow pictures to tilt outwards to any extent; they are very unsightly, and also collect much dust at the back.

If there is no picture rail in the room, the best plan is to plug the wall with a piece of wood and nail into this. This is particularly necessary in the case of a soft wall; it makes it possible to sink the nail to its proper depth, and overcomes the difficulty of coming in contact with a brick, which is a common occurrence in picture-hanging.

Rawlplugs are excellent for this purpose.

The actual arrangement of the pictures themselves is a matter of individual taste, and no hard-and-fast rule can be laid down; but it is well to take into consideration the light, the paper which forms the background, and the use for which the room is intended.

CHAPTER X.

STRAIGHTENING HEELS ON SHOES.

SIMPLE repairs to shoes, such as straightening the heels, can be done at home; in this way a good deal of expense can be saved. Most people wear their shoes down fairly quickly on the outside, and for repairs of this kind very few tools are required.

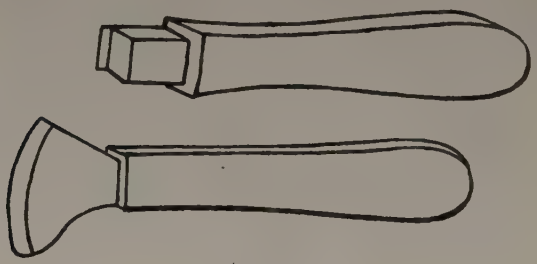


FIG. 31.
BURNISHERS.

A cobbler's last and an awl are necessary, the hammer already supplied in the tool box, and a sharp knife for cutting leather; pliers; a burnisher for finishing the work, and a file or rasp; also some iron rivets, $\frac{1}{2}$ in. to $\frac{3}{4}$ in.; and a piece of sole leather (quite a large piece can be bought for 1s.).

The usual way in which heels wear down involves the repair known as "half-heeling." To effect this, cut across the heel

FIG. 32.

(*a*) REMOVING WORN PART. (*b*) HEEL READY FOR REPAIRING. (*c*) REPAIRS FINISHED.

inside the worn piece, and remove what is known as the top piece; it may then be seen that the lift is worn also, and this must be cut away; however, if one intends to keep shoes in good condition, the heels should be repaired before the lift begins to wear.

We will now suppose that the top piece and the lift both need attention; the worn pieces on both have been cut away and, first, the piece where the lift was must be seen to. Soak the leather for a short time, to make it more pliable; hammer and press into shape, and cut out the exact size required. With the awl, make two or three holes and drive in the rivets close to the cut line and so that the new piece of leather makes the lift quite level—and, in cutting, it is well to leave it slightly larger on the outer edge; these pieces can be easily trimmed afterwards.

Next, cut the top piece and fix in position as before, seeing that the two cut edges "butt" together quite evenly. When this is firmly fixed, two rows of rivets should be put in round the outer edge; these form a strong resistance to the wear which comes at this part. Trim the edges evenly and file if necessary.

A heel ball the colour of the shoes, either black or brown, should next be heated in the gas flame, and rubbed on the cut edges of leather; with the heated burnisher smooth this down. Avoid applying too much heel ball; it looks unsightly, and is difficult to make smooth.

If, through neglect, the top piece has been allowed to wear all over, it must be removed and an entirely new top piece cut and riveted on.

CHAPTER XI.

PATCHING LINOLEUM.

As a rule, when linoleum is laid, there are trimmings left over, which should be carefully stored for repairing the places that wear out first, where the greatest amount of tread is on the floor.

Storage of Trimmings of Linoleum.

The pieces should be stored in a dry cupboard, lying flat, but not near any heat, as this tends to make the linoleum too dry, so that it perishes and cracks. If rolled, right side should be outside.

Preparation for Patch.

With a ruler, draw straight lines where the linoleum must be cut away. Then take a sharp, stiff-bladed knife and, holding it short in the hand, make several cuts along the line, gradually cutting through the entire thickness. It will be found difficult at first to cut the material, but the knack comes with practice.

Preparation of Patch.

Having removed the old piece, match the pattern accurately, and cut a new piece exactly the same size. It will be found easier to do this by taking a pencil line round it and cutting as before.

Insertion of Patch.

Put this in the hole to be filled, and fasten down with brads. (These are sharp nails with no heads.) Insert the nails at least one-eighth of an inch from the edge of the patch and avoid putting in too many. They should be quite $1\frac{1}{2}$ in. apart, and hammered well in, so that they cannot be felt above the surface. The edge of the old linoleum must also be fixed to the floor in the same way as the patch, with the tacks again one-eighth of an inch from the cut edge.

A method of cutting that ensures a perfect fit is to lay over the worn part a piece of new linoleum rather larger than the worn piece, taking care to match the pattern exactly. Then, with a very sharp knife, cut through *both* thicknesses (i.e. the new and the old). When the old linoleum is removed, the new piece is bound to fit exactly. Finish off with brads, as described above.

Repairing Linoleum. (ANOTHER METHOD.)

Linoleum can be repaired very satisfactorily by mixing glue with powdered cork. While still soft, press it firmly into the place to be filled. When quite hard and set, it should be painted over the same colour as the rest of the linoleum.

CHAPTER XII.

STENCILLING; LAMP SHADES.

STENCILLING is a very useful and simple decorative craft. With a little care, almost anyone can stencil. It looks very well done in one colour, so the realization "I know nothing about painting," need not deter the beginner. The initial outlay is small.

Materials Required.

Some stencils.
One or two tubes of oil or water paints.
A tube of medium. (Meguilp.)
A couple of stencil brushes.
Drawing pins.
Blotting paper.
Turpentine.
A piece of rag for wiping the brushes.

Stencilling done with oil paints may be washed with care, but if water-colours are used, it will not stand the washing. With a little practice, workers can cut their own stencils, thus getting original designs.

How to Cut a Stencil.

Procure some thick paper, such as cartridge paper; any which will cut with a clean, sharp edge answers the purpose, but a special paper for cutting stencils can be bought. Draw on the design; place the paper on a sheet of glass, and cut out the design with a very sharp penknife. It is a good plan, when the stencil is cut, to transfer the design on to another piece of paper, so that a fresh stencil may be cut at any time. This is done by laying the cut stencil on the paper and painting over the design with black paint.

Stencils are more easily cut if the paper is first soaked in linseed oil and allowed to get quite dry. This process also strengthens the stencil and makes it non-absorbent. Another good way of strengthening the stencil is to coat the paper on both sides, after cutting, with a thin varnish; that known as "knotting" is cheap, and answers the purpose very well. In a stencil design, in which each portion of the pattern is quite distinct, just a narrow line is left between them. These lines are called "ties," and care should be taken not to cut these ties when cutting the stencil; so, where possible, work away from the "tie" and not towards it.

Stencilling.

Place some blotting paper on a board; over this stretch the material to be stencilled. Fasten down the stencil on to the

material with drawing pins, making it lie very close to the material, so that no paint can get under the edges or ties.

Mix the paint with a little medium and lightly charge the brush

FIG. 33.
CUT STENCIL.

with it; work away from the edges, using a little paint and working it well in, stippling it rather than painting.

When the design is finished, remove the stencil by holding it

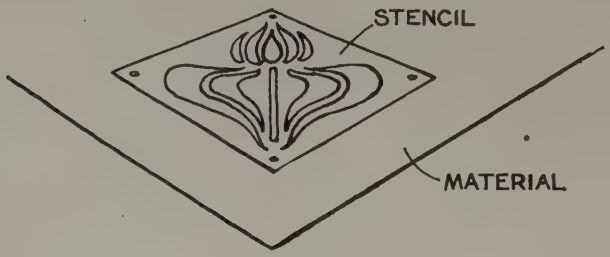


FIG. 34.

firmly down with one hand, until all the drawing pins are out. Then lift it up quickly; do not let it slip, or the stencilled edges may get rubbed.

Before replacing the stencil, wipe the back free from any smudges of paint. Continue in this way until the work is done; then lay it aside carefully until dry.

Wash the stencil brushes in turpentine, and wipe the stencil over with a turpentine rag on both sides. Keep stencils flat when not in use, and keep the paints covered.

If more paint is put out than is required, put it on a small piece

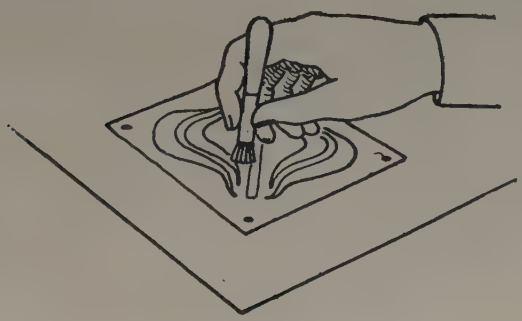


FIG. 35.
"STIPPLING."

of china or glass and slip it under water. It will keep quite fresh and soft for a couple of days, and can be used later.

The following is a good medium when it may be necessary to wash the stencilling—

½ pt. turpentine. ½ oz. oil of wintergreen. ½ oz. acetic acid.

FIG. 36.
STENCIL BRUSH.

To Stencil on Wood.

Fasten the design to the wood with very fine needles put in vertically, so that only a small hole is made in the wood. Apply the paint as for any other material.

When finished, remove the design and allow the paint to dry.

If the design has been put on anything which will receive much handling, it is wiser to varnish it with a clear varnish. This will protect the stencil and also make it possible to dust it.

LAMP SHADES.

Attractive lamp or candle shades made with original designs by the following method are interesting to children, and encourage them also in the collecting of flowers and ferns.

Materials Required.

For these will be required—

Pressed ferns, flowers, or leaves.

A steel comb, with fine teeth set far apart.
Needles.
Ink.
Thin cardboard, or thick water-colour paper, the latter being preferable.

Making the Lamp Shade.

First, cut out the lamp shade, allowing sufficient paper to overlap one-eighth of an inch and form the join. Pin this firmly on a board previously covered with newspaper.

Decoration (Fig. 37).

Arrange the ferns on the water-colour paper and, when they are in the correct position, fasten in place with needles put in vertically, so that they will not be silhouetted on the background. Now hold the comb in the left hand, about 12 in. from the shade, dip the brush lightly in the ink, and brush it across the comb, so that the paper becomes spattered with tiny drops of ink. With

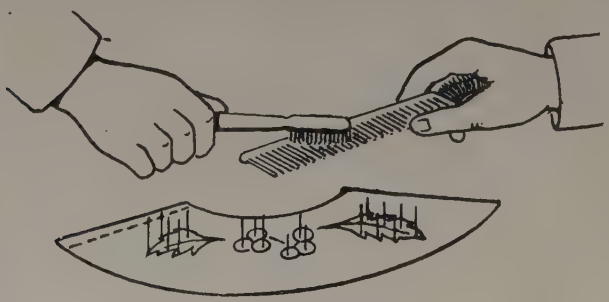


FIG. 37.

practice, one will be able to shade the background and obtain effects of light and shade.

When this ink is dry, unpin and lift off the ferns, which will leave their silhouette in white on the shaded background.

Variations of Decoration.

Variations can be made by removing a few of the ferns before the background is the depth of colour required, and finishing afterwards, which gives the effect of half-tones to the design.

When dry, remove the shade from the board and curl round, fastening with tiny brass paper clips, or gum, to hold in position.

Coloured inks and coloured papers can be used, and all contribute to the various effects that can be obtained. Care must be taken not to have too much ink on the brush, or larger spots of ink will be made, which give the wrong effect. The specks

should be so fine that, they appear simply like fine dust. With a little practice this can easily be achieved.

When arranging the design, place it so that it will meet round the shade and be correct in line. Stencil designs may be used in forming the decoration to obtain the effect of a dark pattern on a light background. Then it should be remembered that all the background must be covered, as any uncovered part will receive ink spots and give the wrong effect.

Maidenhair fern and any very light, spiky leaves give good results. Large, heavy leaves, like ivy, are not so effective, but can sometimes be used to advantage as shaded background.

It is also possible to get the effect of one leaf being behind the other. To do this, take away the top one before the shading is finished, when this top leaf will have the appearance of being in the background.

CHAPTER XIII.

PAPIER MÂCHÉ.

Simple and effective bowls, trays, and various ornaments can be made at home out of papier mâché.

Choose a plain-shaped bowl to begin with ; with practice, more elaborate designs can be done, but at first it is best to try the simple shapes.

Having chosen the bowl, tear some thick newspaper into pieces about 2 in. square, with rough edges. Soak these in cold water for a few minutes.

Start to line the basin with these pieces until it is completely covered with a single layer of paper. Then brush a coat of paste all over the paper ; Stickphast, Rex, or Gloy may be used for this. Continue to put alternate layers of paper and paste until the required thickness is obtained. Usually 25 to 30 layers will give a good solid bowl.

Allow to dry very slowly in a cool place ; then the paper bowl will shrink away from the mould. A better shape will be obtained if the lined basin has another smaller basin put inside it (on top of the paper), with some heavy weight to keep it in position and to keep continuous pressure.

When quite dry and hard, rub down any rough places with glass paper. The bowl may be painted in any colour desired, with a good quality of enamel or paint. Any design in contrasting colours adds to the effectiveness of the finished article. If paint is used, it should be finished with a coat of varnish when dry.

To anyone not having tried this method, it may seem impossible ; but with a little practice an entirely watertight and ornamental bowl can be made. Other articles, too, can be turned out in the same way, the only thing necessary being that the model to be copied shall be a shape which can be used as a mould.

CHAPTER XIV.

WALL-PAPERING—WHITEWASHING—DISTEMPERING—PAINTING.

THE selection of wall-paper is a matter of individual taste, but there are a few general rules which may be helpful in the choice.

The position, size, and shape of the room must be taken into account, and also the amount of light it gets. For a room with a northern aspect, a paper with a warm tone should be chosen; but for sunny rooms the cooler shades look best.

In a lofty room, stripes should be avoided, as they emphasize the height. Small rooms should always have light, plain papers; these give the impression of greater size.

Staircases and passages should be covered with light, washable papers; and, if the light is not good, a soft apricot tone is very helpful.

Sanitary washable papers are most suitable for day and night nurseries; if a plain paper is chosen, it may be relieved by one of the charming friezes obtainable now, representing the nursery rhymes. This should be put about 25″–30″ from the wainscoting, within the reach of children. Below the frieze, and reaching to the wainscoting, black paper looks well, and proves a delight to the children, because they can draw on this paper without causing excessive damage. This may sound an extravagant suggestion, but it is well to remember that many children spend a good deal of their time in their day nursery, and should be allowed one room where their actions are not restricted as in the rest of the house.

Bathrooms, lavatories, and kitchen walls should be covered with varnished paper. This is sanitary and easily kept clean.

Calculation of Required Amount.

Wall-paper is sold by the piece, the usual being 12 yds. long and 21 in. wide. French papers are generally narrower. To ascertain how much will be needed to cover the room, find the area of the walls of the room and divide this by the area of a roll of paper, which is 7 sq. yds. If there is an unusual amount of door and window space, this should be deducted from the area of the room; but if this space is not great, it will allow for the extra roll which is usually bought in case of accidents and for repairing afterwards.

Preparation of Wall.

The walls should be thoroughly soaked to loosen the old paper; this must be scraped off completely. When this has been done, all holes in the walls should be stopped with a mixture of plaster of Paris and whitening mixed with water. This is very necessary,

and adds to the success of the finished work. In the case of completely re-decorating a room, this is the correct order in which the work should be done: (1) Scrape walls and prepare; (2) wash and finish ceiling; (3) wash paintwork and put on desired number of coats; (4) paper room.

Preparation of Paper.

The paper having been bought, it must next be prepared for hanging (i.e. edges trimmed and cut into correct lengths).

To Trim. Take a roll of paper and a large pair of scissors. Sit with roll of paper, right side uppermost, lying on the floor and an unrolled portion in the hand. Trim the edge carefully, rolling up the paper with the left hand as the border is cut. For the amateur, it is wisest to cut off only $\frac{1}{4}$ in. of the border on the right-hand side of the strip as it will hang, but the entire border on the left-hand side must be removed. In professional work, both borders should be completely trimmed, and these cut edges laid together in papering, with no overlapping.

Fig. 38. Scraper.

When the edges are trimmed, the rolls should be cut into strips of the necessary length, care being taken to match the pattern, and to leave 4 in. extra on each length for trimming and perfect fitting. The walls to be papered should be covered with a coat of size. This is purifying, and also adds to the tenacity of the paper.

Wall-paper Paste.

The paste to stick the paper should be made from the following recipe—

2 lb. flour. 2 oz. powdered alum.

Mix the flour into a smooth paste with cold water; add the powdered alum, and pour on sufficient boiling water, stirring all the time, to form a stiff paste. It should be quite free from lumps, and, if very stiff when mixed, a little extra water may be added, because, as the paste cools, it becomes stiffer. When cold, it should be strained through coarse muslin before use.

A commercial preparation called Rex makes a very effective paste; it is simply mixed with cold water to a creamy consistency and used as required. Its only disadvantage is that it is rather expensive and, if much work has to be done, would add considerably to the cost; but for easy mixing and use it cannot be surpassed.

To Hang the Paper.

A table of suitable length is necessary for spreading the paper on while pasting. Spread the lengths on the table, pattern

downwards, and in correct rotation after pattern has been matched. Apply the paste smoothly with a brush (Fig. 41), and fold up about 10 in. at each end of a long length to make it easier to lift the paper. Thin papers should be hung immediately after pasting, otherwise they are liable to tear. Thick papers may be left for a few minutes

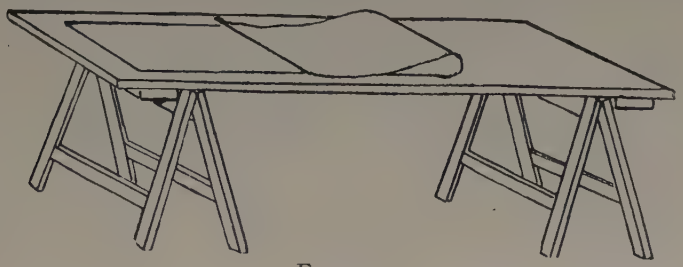


Fig. 39.

to allow the paste to soak in and for the expansion of the paper ; this is a safeguard against wrinkles.

Working away from the light, now fix the paper in position. Avoid all wrinkles by gentle pressure downwards, and from side to side, using a brush (Fig. 40) or clean duster. When half the length is fixed, gently run the blunt side of the scissors at the ceiling edge, or by the picture rail, if there is one, to form a crease for neat cutting. Draw the paper away from the wall and cut along this line. Press the paper back on to the wall again, when it should fit evenly. Gradually work round the room until the window is reached again. At the corners the paper should be cut to the exact width and have the pattern matched ; paper should never be taken "round" a corner.

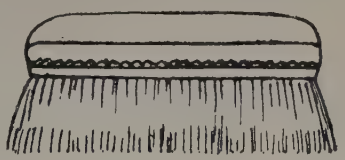


Fig. 40.

Fig. 41.

To Patch Wall-paper.

If by chance wall-paper gets torn, the unsightly part can be rectified by careful patching. Take some of the paper which has been left in reserve and match the pattern. Then tear this with a rough edge sufficiently large to cover the hole. Fix in position with paste and, when dry, it will be almost invisible if the pattern has been carefully matched. The secret in putting it up so that it will not show is the torn edge ; if this edge is cut with scissors, the hard line is very easily detected.

Whitewashing.

This is a cheap and efficient means of covering walls and ceilings indoors. It is particularly suitable for kitchens, passages, larders, etc. Owing to the cheapness and easy process of application of whitewash, it is possible to keep very clean the surfaces on which it is applied.

The process looks simple enough, but actually it requires great care. For instance, in a room where gas is used, a ceiling may require whitewashing while the walls are still clean. In this case, careful work is necessary to avoid splashing the walls. It is no uncommon experience for a householder who has undertaken this task too lightly to have to call in a paperhanger, not only to whitewash the ceiling, but to paper the walls as well! With care, however, the work can be very well done by the beginner.

To Make Whitewash.

Quantities—

3 lbs. whitening.
¾ lb. concentrated size ; Blue (to improve colour).
or 1 lb. jelly size. Cold water for mixing.

Put the whitening into a bucket and cover with cold water. Leave overnight.

Pour off the excess of water, and mix smoothly with the hand.

Dissolve the size in boiling water, and mix with the whitening.

Add sufficient blue to improve the colour, and extra water if necessary to make creamy consistency. Strain through coarse muslin.

Preparation of Wall.

The wall must be thoroughly washed. Water, in which rock ammonia has been dissolved, is the best preparation for removing whitewash from walls. If it has been papered before, all old paper must be scraped off. Any holes should be stopped with plaster of Paris and whitening mixed with water.

Whitewash Brushes (Fig. 41).

These are expensive, costing anything from 8s. 6d. upwards, and need careful treatment. If quite new, they should be soaked for 24 hours in cold water, to harden and fix the bristles.

To Use the Whitewash.

Dip the brush into the whitewash, allowing it to come half-way up the bristles. Apply the whitewash evenly, working from left to right, and making each stroke overlap the previous one.

To remove any splashes on the floor when the job is finished, clear cold water should be used.

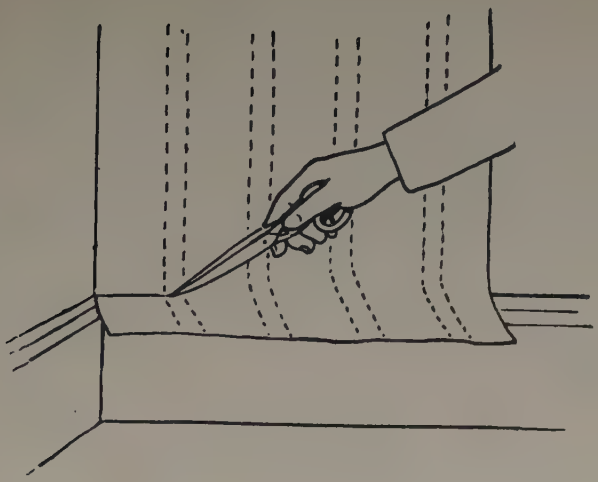


Fig. 42.

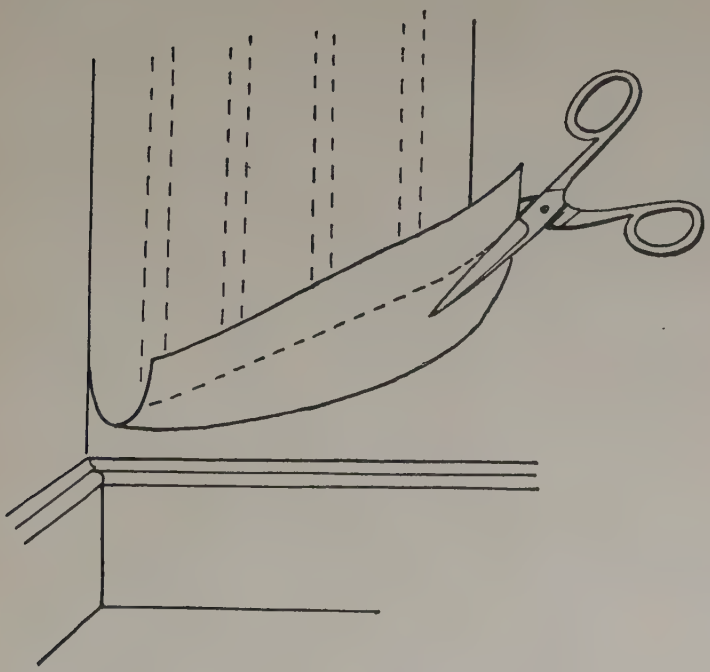


Fig. 43.

Distempering.

Distemper can be prepared at home at a very small cost by the same recipe as for whitewash, omitting the blue and adding a pigment of whatever colour is desired.

To use the colouring, mix smoothly with cold water and add to the prepared whitewash.

Walls should be washed until thoroughly clean, and the distemper applied evenly, each stroke overlapping. The type of brush shown in Fig. 41 is suitable for applying distemper.

If the surface of the wall is very rough or discoloured, a cheap lining paper should first be hung, and the distempering done over this.

Painting.

Amateurs often find it difficult to accomplish a painting job successfully, but if they know how the job should be done, there is no reason why it should not be quite as good as professional work.

The surface to be painted should first be washed with hot water, soap, and soda; this will remove all dirt and grease. Then it should be rubbed well down with glass paper, until the surface is uniform.

For quite new wood, paint over the knots with a little French polish (i.e. shellac and methylated spirit—known as "knotting"). This prevents knots from "bleeding." Then, with a thin coat of paint, known as "priming," cover the wood, always working the brush well out, and being careful of the edges. Do not allow any paint to run down in streaks.

For the next coat, use the paint thinned with raw linseed oil; this will give it body, although it will dry more slowly.

For the third and fourth coats, thin the paint with turpentine.

All through the job, charge the brush lightly with paint, and use as little as possible, working the paint well in.

The surface should be rubbed with fine glass paper between each coat.

CHAPTER XV:

STAINING AND POLISHING WOOD.

WELL-MADE wooden boxes can be made into many useful household articles, such as—

Boot boxes.
Medicine chests.
Knife boxes.
Boxes, lined with chamois leather, to hold small silver spoons (Cigar boxes).
Work boxes.
Bookshelves (from Tate sugar boxes).

It is necessary, of course, to prepare the wood for staining and varnishing in order to turn out a well-finished article.

Preparation of Box.

The box should be first washed and scrubbed, if necessary. When it is dry, good hinges of suitable size should be fixed, and any holes or rough places in the wood filled with a mixture of plaster of Paris, coloured with water stain ; or—

1 oz. resin. 2 oz. beeswax.

Colouring according to the wood for which it is to be used.

Either of these mixtures is pressed into the holes until well above the surface, and then rubbed down with sandpaper until quite smooth.

The whole surface of the box should be sandpapered at the same time. It must be remembered that thorough sandpapering of the box will add very much to the success of the finished work.

Staining.

There are many commercial stains on the market, but it will be found far more economical to prepare the stain at home.

To Prepare the Stain.

Take 2 oz. of vandyke crystals and pour on 1 pint of boiling water. Stir until dissolved. Store in a covered tin. When cold, it is ready for use. This quantity gives a dark brown stain, but, if a lighter tone is required, simply add more water.

To Apply the Stain.

Choose a soft, medium-sized brush, and apply the stain in straight lines, following the grain of the wood and allowing each stroke to overlap the last. Avoid " working " the stain too much, particularly on a soft wood.

Use of Size during Staining.

It is possible to give the stain greater permanency by applying a coat of size between each coat of stain. This also fills the tiny holes due to the grain of the wood.

One or more coats of stain may be needed, according to the colour required. The stain should be allowed to dry between each coat. At this stage, rub down with No. 1 glass paper slightly oiled. This produces a smooth surface. Do not rub hard, but gently.

After staining, the next step is the finishing of the box.

Polishing.

This is usually done by polishing either with oil, such as boiled linseed oil, or with French polish.

Oil Polish.

This is rubbed into the wood, a little at a time, with a felt pad,

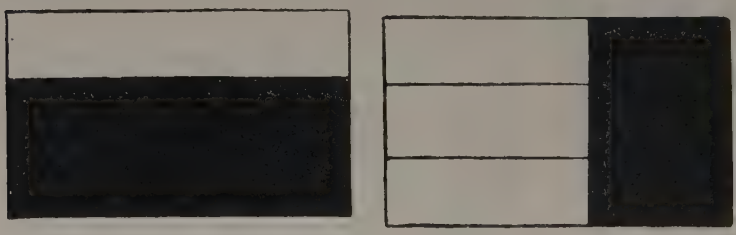


FIG. 44.

(*a*) CORRECT METHOD OF APPLYING STAIN. (*b*) WRONG METHOD OF APPLYING STAIN.

until a good polish is obtained. Too much oil should be avoided, as this only creates a greasy surface; a little oil and plenty of hard rubbing give a deep-toned polish. Wood polished in this way is easier to keep in good condition, and will not show marks readily.

French Polish.

There are many recipes for French polish; two are given here: both work very well and give good results.

(1) 1 pt. methylated spirit. 4 oz. shellac.

Put the shellac into a bottle and cover with the methylated spirit. Cork tightly, and leave 24 hours to dissolve.

(2) 2 oz. shellac. 1 oz. gum copal.
1 oz. gum arabic. 1½ pts. spirits of wine.

Put these in an old syrup tin or bottle and allow them to dissolve together; then strain through muslin and keep tightly corked.

In applying French polish, it is essential that the polishing be done in a warm atmosphere, and also the surface of the wood must be made as smooth as possible. Careful sandpapering before staining is not sufficient; before applying the polish, sandpaper the wood again, using No. 2 fine, and then rub with powdered pumice.

It must be realized that, in this process, the tone of stain must be darker to begin with than the colour desired for the finished result.

To Apply French Polish.

First apply a very little linseed oil to the wood; rub this in well until quite dry. Then prepare the pad for the French polish.

Take a piece of cotton wool, which will make a good pad, and put some of the polish on this. Then cover the cotton wool with a clean linen rag, and there should be enough polish on the wool to soak through to the linen, but it must not be too wet or sticky.

Start rubbing this pad on the surface of the wood very lightly and with a circular movement. From time to time it will be found necessary to take a clean linen rag, put as before over the pad of cotton wool; always avoid using too much polish or a sticky rag. The amateur generally imagines that a lot of polish is necessary to get a good result, but this is quite wrong. A good surface is obtained by the knack in polishing, which is really the lightness of touch, and it is difficult to achieve this without practice.

"Spiriting Off."

When a good polish has been obtained, the next step is what is known as "spiriting off." This is done with a clean pad and rag, using pure methylated spirit. It is no exaggeration to say that only two or three drops of spirit should be used. This, with very light application, gives the high polish which is the usual finish for French polish. It must be remembered, however, that if much methylated spirit is used the result will be, not a high polish, but that the original polish will be removed. The beginner should not be disappointed if the result is not what was expected, because it is necessary to realize that unless the wood is mahogany or some other well-seasoned type, a high polish *cannot* be obtained.

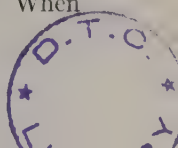
Shellac Varnish (Orange).

Stained wood is sometimes finished by varnishing, and shellac varnish may be used for this, made in the following quantities—

4 oz. orange shellac. 1 pt. methylated spirit.

Put the shellac in a tin with a tight-fitting lid. Cover with methylated spirit; leave 24 hours.

The stained wood should be well sandpapered and rubbed with a little oil. Then the varnish is applied with a fine brush. When



using this varnish, remember that it is very much affected by atmosphere, and needs warmth when applied. If necessary, the tin containing the varnish should be warmed by standing in hot water, and the work done near a fire.

Shellac Varnish (White).

A suitable varnish for applying to light colours can be made from white shellac and methylated spirit in the quantities given above. When dissolved, it should be strained and kept tightly corked.

A Simpler Finish.

Stained wood looks well when finished by the simple method of polishing with a good home-made furniture cream, or with one of the best of the many commercial preparations on the market.

CHAPTER XVI.

UPHOLSTERED BOXES.

Wooden boxes, covered and lined with soft material, and arranged so that the inside can be used for needlework, form useful and attractive furniture.

Preparation of Box.

The box should be scrubbed and the lid fixed with hinges of suitable size.

Materials Required.

Enough unbleached calico to cover the box inside and out, with allowance for ½ in. turnings.

Wadding to cover the outside of the box, excluding the bottom.

Three to 5 lb. of Kapok stuffing, according to the size of the box, for padding the lid.

Sufficient material to cover the box inside and out, with allowance for ½ in. turnings.

A piece of black canvas to cover the bottom of the box (outside).

Four silent domes, or four castors.

Cord or gimp for finishing edges.

Tacks to fasten covering.

To Cover Box.

First cut pieces of unbleached calico with ½ in. turnings to fit the inside and the outside of the box. The four sides and bottom should be machined together, forming two separate box-shaped pieces.

Put pieces fitting the inside in position, and fasten in place with small tacks, about ½ in. down from the top edge.

The outside is next fixed, and, where it turns over the top of the box, it will neaten the rough edges of the inner lining. Where the hinges come, it is necessary to cut the material slightly to make it fit, but care is needed to see that it is strongly fixed round the hinges.

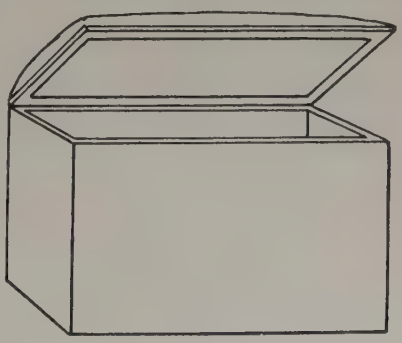


Fig. 45.—Upholstered Box.

Next tack a piece of calico on the outside and inside of lid, turning in the ½ in. as before.

The top of the lid must now be stuffed; with some string, take long tacking stitches all round the lid, about 1½ in. from the edge and from corner to corner. Tease out the stuffing and put it in even-sized bundles underneath the string; this makes a foundation, and the shape is easily built up. The stuffing should lie closely together and not have uneven places in it, and the top should be higher than the sides, sloping down evenly.

As to the quantity of stuffing necessary, it is difficult to give an accurate amount, but it must be remembered that the outer covering, if put on sufficiently tightly, will flatten the stuffing very much; therefore, it must be curved far higher than the finished top will be. When stuffed, a piece of calico is nailed over the top and drawn very tightly to the edges. To do this, nail one side first, then the opposite side, and next the two ends. By taking the sides opposite each other in this way, a more even pull is obtained; at first, no nails should be driven home until all are fitting properly.

Now, over the top of the lid and the four outer sides, a layer of wadding is sewn; this softens the corners of the box, and gives a better finish.

Whatever material has been chosen for the outer covering should now be prepared. These boxes sometimes look very well if lined with a contrasting colour. Cut the lining and outside in just the same way as the calico, and machine them into two box-shaped pieces. Tack the inner one in position round the top, not round the bottom; this is left so that the lining can be drawn up and the corners brushed thoroughly when in use. Put on the outside, turning in the edges neatly over the lining. Stretch the top very tightly and nail in place; and, lastly, put in the lining of the lid.

The edges on the outside can be finished in several ways: thick cord may be sewn on with a curved needle; or a crossway piece of material, 1 in. wide, folded and held in position by brass nails arranged equal distances apart, looks very well.

To give a more serviceable finish, a piece of black canvas should be nailed on the bottom, and four silent domes or castors fixed. To prevent any undue strain on the hinges, narrow straps of material, neatly machined, should be fastened on to the inside lid and taken down about 3 in. inside the box.

Wooden Boxes Upholstered to Form Floor Ottomans, with Spring Seats.

1. A box which can be bought at small cost.
2. A small amount of stuffing is needed (as this is a good way of using up some that may have been left over from another upholstery job).
3. A remnant of cretonne, canvas, or any art linen to form the outer covering.

4. Six or eight springs, according to the size of the box.
5. Some webbing, to which the springs will be sewn.
6. A yard or two of strong unbleached calico.
7. Some upholstery twine.
8. Four castors or silent domes.
9. Two hinges.

To prepare the box, remove any odd protruding nails, and if the surfaces or edges are rough rub them smooth with sandpaper.

Saw the box in two, dividing it so that the top half is not as deep as the lower half. These halves are upholstered separately and, when finished, are fixed together with hinges. The stretched webbing must first be put on to form a foundation for the springs; this is done in exactly the same way as that described in the chapter dealing with "The Setting up of Springs." Next, stitch the springs to the webbing, arranging them at equal distances apart, and sew each spring in its place, using the upholsterer's twine. The springs should now be lashed; this is done to keep them in position, and also to graduate the height the upholstered top should be when finished. Drive in a nail opposite each spring on the sides and ends of the box, and attach a piece of string to one of these; carry up this string and knot it to the outer ring of the first spring; then take it over the top and across the springs, knotting it in several places to each spring, to prevent slipping, and to keep an even pull. Next take it down on the opposite side, and fasten it to the nail previously put in. Each spring should be lashed in the same way, from end to end and from side to side of the box.

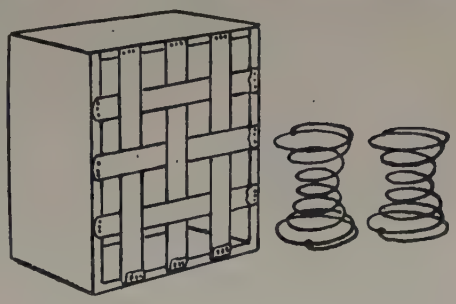


FIG. 46.—BOX WITH WEBBING FIXED, READY FOR SPRINGS TO BE SEWN.

FIG. 47

Next cut a piece of unbleached calico sufficiently large to cover the springs; tack this in position, keeping it very taut, and stitch the springs to the calico where they touch. This piece of calico is

put on for a foundation to take the stuffing, and on all four sides of the box some material must be tacked as well. On to the material on the sides, loops of twine are sewn, in three or four rows, according to the depth of the box.

Suitable Stuffing.

Horsehair is the best, but unless sufficient was left over from some other job, it would add very much to the expense to buy it specially for this box; other fillings, such as flock, or vegetable fibre, give almost as satisfactory results.

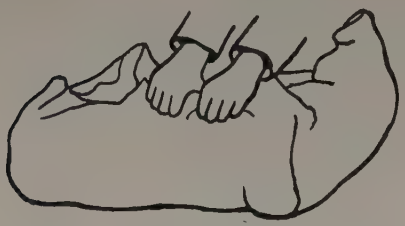


FIG. 48.

Arrange the filling over the springs, and, when sufficient has been put on, with a long needle take tacking stitches with string here and there over the top, to hold the stuffing in place. It should be remembered now that the curve of the top must be much higher at this stage than when finished. Tightly stuffed and well-finished upholstery keeps its shape indefinitely, but to achieve this the stuffing must be well packed, and all covering materials stretched to their utmost when put on.

The stuffing for the sides is pushed under the string loops, and care should be taken to get an equal amount on all four sides.

Now over the top and the four sides a piece of unbleached calico should be nailed; this must be pulled very tightly, and nailed in position.

FIG. 49.

The bottom half of the box is done in just the same way as the sides and the top part, and when this is finished, the outer covering is put on. The colour and pattern of material should be selected with due consideration of the main features of the room for which this piece of furniture is intended, but it must be material of firm texture to stand the tight pulling into position which will be necessary if a well-finished article is to be turned out.

To put on the outer cover, cut two pieces of material, one for the top and one for the bottom portion of the box, allowing ½-in. turnings for neat finishing. Nail these securely in position, drawing them well down at the corners, and cutting away any fullness.

If so desired, the extra fullness which comes here may be gathered and finished as the corner of a pouf (see Chapter XXI). The box is next lined, and if it is intended as a box for sewing materials, small pockets on the inside are very convenient. The upper portion of the box is now fastened to the lower part by two 1½ in. hinges fixed at the back, and short straps of material fastened on the inside of the bottom portion and on the lid prevent a strain being put on the hinges when the box is opened. A small tab inserted in front will be found useful, and four castors, or silent domes, fixed to the four corners, complete an attractive and useful piece of furniture.

CHAPTER XVII.

SIMPLE LEATHER WORK.

All sorts of simple leather articles may be made at home at a very small cost. In this book only the simple arrangements will be dealt with, no account being taken of embossed leather work with elaborate stencil designs.

The following articles are some of the many things which can be made in charming and effective colours—

Blotters.
Pad holders.
Purses.
Waistcoats.
Hats.
Gloves.
Moccasins.
Hatbands.
Shopping bags.
Cushions.
Book-holders.
Treasury Note cases.
Manicure cases.

Leather or suède may be bought at many places nowadays, and the following are the names of two reliable shops—

George & Co., Noel Street, Wardour Street, W.
Russel & Co., Hitchin.

Whole skins from 5s. upwards, or bundles of various coloured pieces for 5s., can be obtained; also press studs to match the leather and the tool for inserting these.

The only tools necessary will be a sharp knife or scissors, and a leather puncher to make the required holes for joining the pieces by means of thongs.

A puncher supplied with six different sized holes may be bought for 3s. 6d. at any good ironmonger's, and with the various sized holes many different effects can be obtained.

To Make Moccasins.

A pattern for moccasins (drawn to scale) is given in Fig. 50. Cut to this exact size, allowing no turnings.

Material.

Suède makes up very successfully for these.

To Cut.

It will be found easier to cut the leather economically if a pattern for each foot is laid on the leather at the same time. Note that the rub of the leather is going the same way; this makes a distinct difference in the shade.

To Make.

Join the seam at the heel with fishbone stitch and turn up the small flap, sewing neatly to the heel seam. Leave from 3 in. to 4 in. plain from the heel seam, and then start gathering round the toe, until the same point on the other side is reached. Draw up to the required size. Leave about 1½ in. of the flap, and from this point stab-stitch the flap to the gathered toe until the opposite side is reached again.

Decoration.

Any decoration may be worked on the flap. Beads, raffia, stencil, or a design cut out on the leather, and some contrasting colour put underneath, look very well.

Lining.

The lining is usually made of some soft material, such as "Teddy Bear" cloth, or a good flannel. This is cut and made in exactly the same way as the leather. Slip the lining into the leather covering; to hold it in place round the edges, fur is used. Start at one corner of the flap, and fix the fur by running stitches on the outside of the slipper. Then turn the unstitched edge of fur over and hem on the inside to the lining. Plain leather may be put on in the same way to make a variety in finish; a fringe cut from leather is effective.

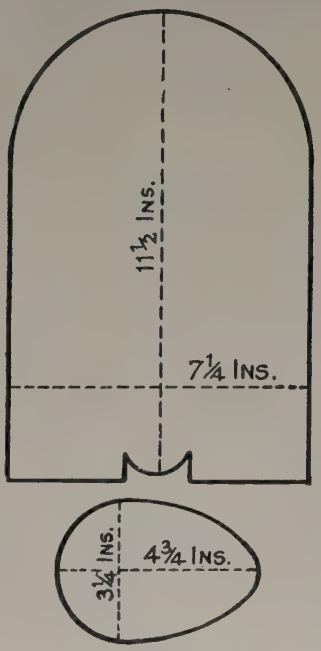


Fig. 50.
Pattern for Moccasins.

To Make a Waistcoat.

Cut out the pattern in leather to the required size, leaving very small turnings where the seams come, but none at the neck, waist, front, and armholes.

Oversew the underarm seams. Cut ½-in. strips of leather on the cross, and stick these firmly with Croid on the wrong side, so that the two raw edges lie evenly together at the neck, fronts, and waist.

Cut thongs from an oval piece of leather, getting the strips of as great length as possible. Cutting from an oval like this keeps the thongs from twisting when threaded through the holes.

With the puncher, make the holes to the required size, ½ in. apart all round the neck, armholes, fronts, and waist, going

through the double thickness of the waistcoat and crossway piece.

With a leather needle, threaded with the thong, form an over-sewing stitch; or, if preferred, a cross-stitch may be used if carefully spaced holes have been made.

A waistcoat with the fronts crossing well over makes a very pretty shape; and where the lap-over comes, press-studs of the same

FIG. 51.—FINISHED WAISTCOAT.

FIG. 52.—SHOPPING BAG.

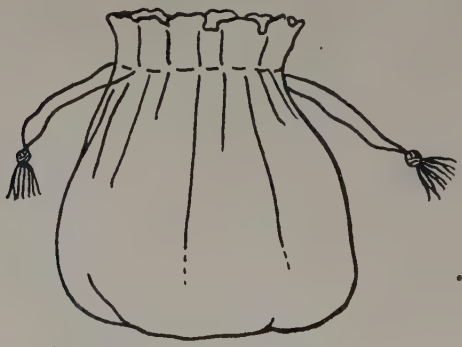


FIG. 53.—LEATHER BAG.

colour as the leather should be fixed. The proper tool for this purpose and the studs can be bought from Messrs. George & Co., Noel Street, W.

To Make a Shopping Bag.

A useful shopping bag is easily made according to either of these patterns.

Cut two oblong pieces to the size required. Cut a crossway piece 1½ in. wide to go between these, to give fullness to the bag.

Punch holes $\frac{1}{4}$ in. from the edge of the seams. To get successful punching in two pieces of leather not fixed together, it is a good plan, when the first two holes have been punched, to tie these together ; this will prevent the leather from slipping while further holes are punched.

Thongs should be cut from an oval piece again, and used to join the two sides of the bag. Strong handles, made of two thicknesses, may be fixed to the bag about 2 in. down from the top edge.

If punched and thonged, the handles are stronger and more lasting. To fasten to the bag, use either machining or thonging.

If the thonging has to be joined, skive the edge ; this is really taking off some of the thickness and making the end so that it can easily be glued on the wrong side and held in position.

The bag may now be lined. Cut silk to the same shape, with $\frac{1}{4}$ in. turnings ; machine together and slip into the leather covering. Fix to the leather, at the top edge, with Croid.

The illustrations given above are merely suggestions for simple things which can be made with little trouble and expense.

After practice at the simple work, more elaborate designs can be undertaken with assurance of success.

CHAPTER XVIII.

RAFFIA SLIPPERS.

ATTRACTIVE bedroom or bathing slippers may be made from raffia, either natural-coloured, or the dyed variety. If the natural colour is used, the joining stitch shown in the diagram, worked in colours, looks very well.

To Make the Slippers (No. 1).

Plait tightly several long lengths of raffia of even thickness, from ½ in. to 1 in. wide, according to the size of the shoes to be made.

Cut out the shape of the sole of the shoe in cardboard, and sew the plait of raffia on to this, as shown in Fig. 56 (1), making it lie as flat as possible.

Next, sew the rows of raffia together with a stitch, going through the raffia only.

When the whole is firmly sewn together, remove from the cardboard and hammer gently with a mallet to get a smooth surface.

For the uppers, sew the plait on to cardboard, as Fig. 54 (2), and join together with the stitch in Fig. 55 (3). This makes the slipper softer; but, if preferred, the entire upper may be made of plaits stitched together, as in the case of the sole. Remove the cardboard and hammer again as for the sole.

If the slipper is to be lined, it should be done now.

Next join the heel of the upper, and put the seam to the centre edge of the heel of the sole; join the upper to the sole with a strong oversewing stitch, starting at the back and working up both sides to bring the fullness to the front.

RAFFIA SLIPPERS (No. 2).

To make another kind of raffia slipper it is necessary to prepare two pieces of cardboard spaced and lettered according to the diagram. The size may be judged from the pattern for moccasins illustrated on page 59.

Other Materials Required.

2 metal rings about the size of a shilling.
Raffia of various colours.
2 soles to which the raffia tops are sewn.

To Make the Slipper.

Having prepared the cardboard, sew a ring between *Z* and *Y*, and then, taking a long strand of raffia threaded in a tapestry

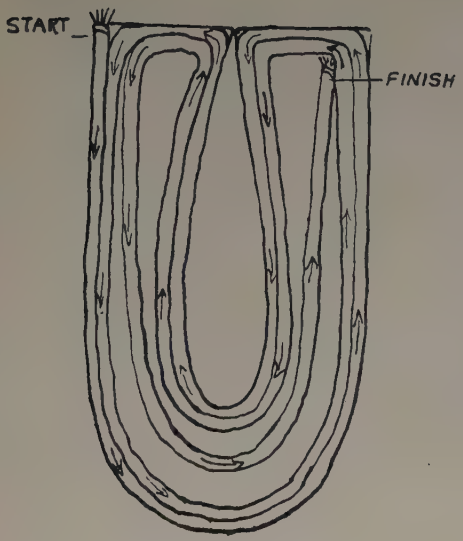


FIG. 54.—DIAGRAM (2)

FIG. 56.—DIAGRAM (1).

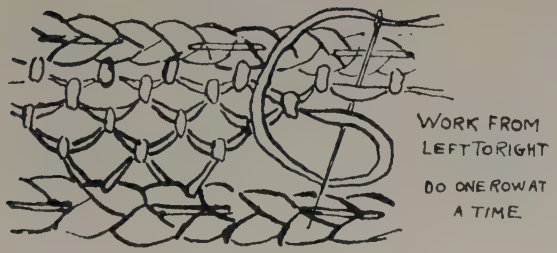


FIG. 55.—DIAGRAM (3)

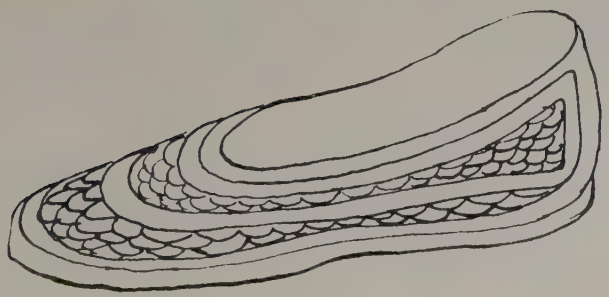


FIG. 57.

FINISHED SLIPPER—FIRST KIND.

needle, start at the point *X* and take the raffia across to *W*; then bring the needle up again at the point *V*, and across to *U*, and so on until the point *R* is reached. From this point until *Q* is reached, the threads are taken from the outer holes through the ring in the centre, which takes the place of the inner holes. From *Q* the cross-threads start again, until the other side of the heel is reached.

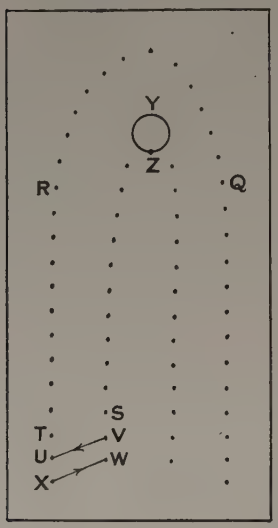


Fig. 58.

When the threads for the foundation of the weaving have been put in, the weaving itself is started.

Commence weaving at the point *W*, and, taking up alternate threads, continue weaving right round to the other side; when this is reached, turn and weave again in the opposite direction. The strands of raffia should be drawn firmly, but not too tightly; if too tight, they draw the slipper out of shape. To improve the shape, the weaving may be tied down to the cardboard in one or two places, and cut when the weaving is finished. When fresh threads of raffia are needed, the ends of the old and the new should be tied together on the under side with reef knots.

The contrasting colours should be woven in to form a pattern; or, if this is not desired, a jazz effect may be obtained by using the raffia in no definite sequence. All the lines should lie closely together, to give a solid effect.

When the weaving of both slippers is complete, cut the stitching which holds the ring in place, and tear the cardboard foundation away carefully, to avoid breaking or straining the raffia.

If the slippers are to be lined, it should be done at this stage, the lining being button-holed where it meets the edge of the slipper.

Fasten up the back with raffia, and then sew the slipper securely on to the sole.

CHAPTER XIX.

RE-UPHOLSTERING A CHAIR.

In another chapter the setting up of springs in a chair has been dealt with, but here the entire renovation of the chair, from the frame upwards, will be explained.

To Strip the Chair.

Remove the gimp or cord which is generally put on over the edges of the material in the finishing of the chair. Then carefully remove nails from the material itself, and gradually take it off piece by piece. Underneath the outer covering will be found either unbleached calico or hessian. This is taken away next, and after that the stuffing, layer by layer, until the foundation of the chair is reached (i.e. the springs, webbing, and hessian to which the springs are sewn).

Preparation of Materials to be Replaced.

The stuffing removed from the chair needs attention. If composed of hair, it may be washed. To do this, tease it out; place a portion at a time in an old pillow-slip and wash in warm soapy water, rinsing while still in the bag. In fine calm weather, it may be spread on a sheet on the grass and allowed to dry, otherwise it should be spread on trays and dried on the rack above the range. If composed of a mixture of flock and fibre, this should be beaten to remove dust, and made as clean as possible; also any calico or hessian. In the case of a second-hand chair, it is well to wash all materials, if they are to be used again.

New Materials Required.

It is always advisable to put new webbing on the chair, and also a new piece of hessian to which the springs will be sewn. As a rule, new material for the covering will be bought, and fresh wadding will also be needed.

To Re-upholster the Chair.

The framework of the chair should be looked to first; very often an old chair may need strengthening at the joints with corner-angles either of wood or of metal. Any broken pieces should be fixed with glue and tied together firmly with tape until the glue is set. The wood should be examined for any signs of worms, and these should be treated by any of the following methods:

1. Spraying the affected part with paraffin.
2. Spraying the affected part with camphor dissolved in paraffin.
3. Spraying the affected part with benzoline.

The treatment should be repeated two or three times, and then the holes filled with a mixture of beeswax and resin mixed with turpentine.

The foundation for the springs is next put in place; this is composed of strands of interlaced webbing stretched very tightly across the bottom of the chair. In another chapter the setting up of springs has been fully dealt with, and should form a guide as to the method of work, the only difference being that, in this case, the stretching of the webbing on the chair frame is the first step. The number of strands will vary with the size of the chair; but to get successful and lasting work, a good number of strands are necessary, and it is well to err on the side of too many rather than too few.

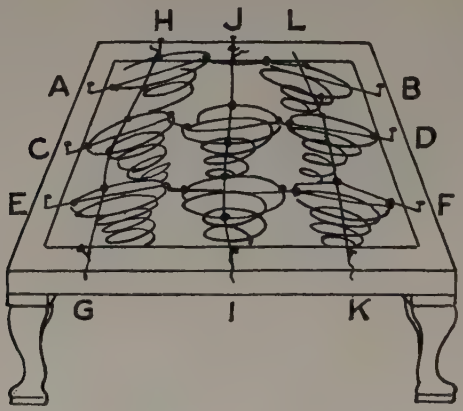


FIG. 59.—SPRINGS LASHED IN POSITION.

When the webbing is in place, the springs are next spaced over the webbing and stitched securely to this, each spring in at least three places.

After sewing to the webbing, the springs must be lashed before the covering hessian is put on. To prepare for lashing, either three or four nails should be driven into each rail of the chair frame, at equal distances apart, and also from the chair legs. Then tie upholstery twine securely to the first at letter *A*, and tie it to each of the top coils of springs, as it goes in a direct line to the letter *B*. The twine is used to regulate the height of the springs; and as it is tied up on the nail (point *B*), the two outer springs should be lower than the centre ones, thus making the curved shape which the seat should have. Twine is tied to each succeeding nail, until all are used.

The springs must now be covered with strong hessian. Tack this to the frame, starting at the middle of the back and finishing

this ; next, the middle of the front in the same way, and then the side rails. The material for this is cut with a good margin, tacked with a raw edge, and this edge afterwards should be turned back and tacked in a few places to keep it in position.

The springs are now sewn to the hessian, which covers them, with the double-pointed needle and twine ; care should be taken not to allow the twine to become entangled with the springs—it should be fastened round the top coil only.

Stuffing.

The next step towards the completion of the chair is the stuffing. The seat is stuffed first, the hair or fibre being pushed under the loops of twine which have been tacked on to the hessian covering the springs (see diagram) ; then the arms ; and, last of

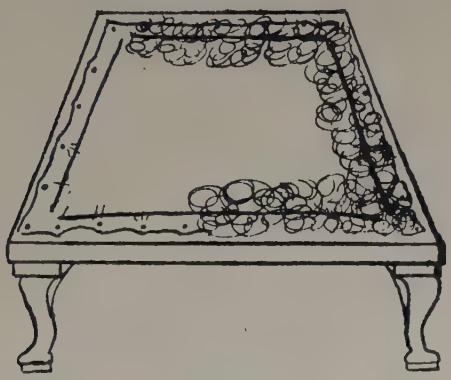


Fig. 60.

all, the back. The stuffing material may be divided into two : first and second stuffing. In good upholstery, the stuffing is usually composed of horsehair ; this is expensive if used throughout the chair. For the first stuffing, a mixture of fibre and flock makes a good foundation, and then the second stuffing may be composed of horsehair.

Preparation of the Roll.

On all four sides of the seat it is necessary to make a very firm stitched roll, so that the stuffing will keep in place ; it is also done on the scrolls of the arms and back. This also applies to Chesterfields and ordinary dining-room chairs.

Drive some tacks into the top of the seat frame, all round, about 6 in. apart. Attach twine to the first tack, and run this from tack to tack, forming loops ; below these, on the front rail,

a piece of hessian is temporarily tacked, sufficiently large to cover the whole seat, and to allow for a double turn when finally nailed in position.

Into the loops of twine the first stuffing is put, and the edge built up from this. When sufficient stuffing has been put in all round the four sides, and a solid layer over the entire seat, the loose piece of hessian is turned over the top of the seat, and fixed by long tacking stitches about 4 in. from the edge of the chair, sufficient quantity being allowed to stitch into the roll and also to tack on the remaining three sides of the chair. These nails are only temporary, and may need to be removed and replaced, a few at a time, if more stuffing is found necessary during the stitching of the roll.

Stitching the Roll.

Thread a double-pointed needle with a good length of twine, and start stitching on the outside of the bottom of the roll, near

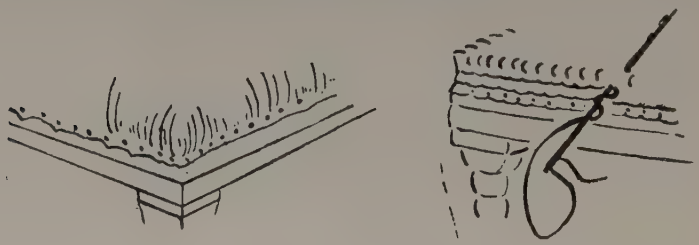


FIG. 61.—STITCHING ROLL.

the framework, at one leg, going through hessian, stuffing, and hessian on the inside; leave sufficient twine to tie securely, and take a stitch on the inside about 1 in. in length; before inserting the needle to come back, the twine must be twice wound round the point of the needle. As the twine is drawn through following the needle, this double twist forms a locking stitch. This stitching is continued round all four sides of the chair; and, on an arm-chair, there should be four or five such rows.

After the completion of the first row, the next row is started about ½ in. above the previous one, and each succeeding row put in the same distance up, until a firmly stitched roll is complete.

During the stitching of the roll, the stuffing should be worked into position, if necessary, by means of the regulator or the double-pointed needle, because it is essential that the roll be very firmly sewn and very tightly stuffed.

If the worker is quite content with the shape of the roll and the first stuffing over the entire seat, the tacks holding the scrym may be driven home.

The Second Stuffing.

This is what forms the rounded shape which the seat should have when finished. Into the piece of scrym covering the first stuffing, sew long tacking stitches with twine. Under this put the foundation of the second stuffing. Flock is best for this, because it offers more resistance during wear, and the top layer may then be finished off with hair. The seat must be very tightly packed, though not hard, and no uneven places left; also it is necessary to remember that the tight outer covering will flatten the seat very much, so, for this reason, it should be built up rather higher than the finished curve will be. When the second stuffing is in place,

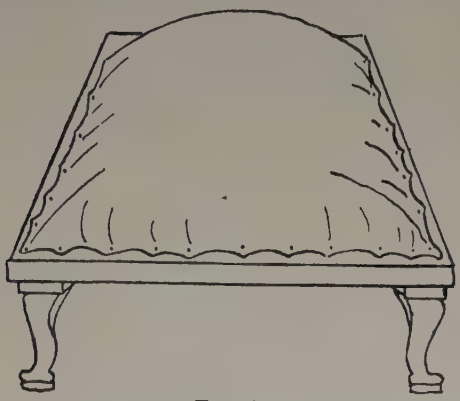


FIG. 62.

a piece of unbleached calico, sufficiently large to cover the whole seat—leaving enough to be nailed to the chair frame—should be put in place temporarily.

The Arms.

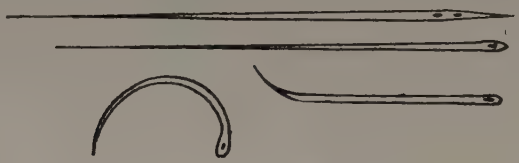
The arms are the next part of the chair to be done. Some chairs have small springs along the top and inside arm. To fasten these, nail webbing to the chair frame, and stitch the springs to it. Next lash them as for the seat, to regulate the height. Over the springs and outside arm, nail a piece of hessian; sew each spring to this in three places; and on the front, tack a piece of scrym to form a roll at the scroll, as for the seat. Take long tacking stitches through the hessian in the most convenient places, to take the foundation stuffing. Start stuffing with flock; finish with hair. When sufficient stuffing has been put in to form the first stuffing, sew the scrym temporarily to the hessian and, using the same stitch as for the seat, sew the roll with at least three rows of stitches on the edge of the arm.

Add more stuffing to the main part of the arm, if necessary,

curving it into a good shape where it meets the seat. Over all this, nail a piece of unbleached calico, from the outside of the arm to the inside, putting the nails in lightly until the chair is complete.

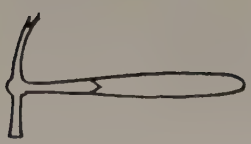
The Back.

The back is done in exactly the same way as the arms; but if there are no springs in the back, it must have five strands of webbing to give support. Nail the webbing so that three strands



Upholstery Needles.

Regulator.



Upholstery Hammer.

Webbing Stretcher.

Fig. 63.—Tools Used in Upholstery.

come from the top rail to the bottom, and two interlacing from side to side. Nail hessian over the inside back, and put the stuffing on to it. The scrolls at the sides of the back are done in the same way as the arms, and over all a piece of calico is nailed.

Finishing.

Now, the calico covering the various parts of the chair must be drawn as tightly as possible, and nailed very securely to the frame. The finish of the chair will depend very much on the tightness of these coverings. No nails should be driven home until all the pulling is done, because the nails have frequently to be moved as the material tightens.

On the outside back a piece of calico is nailed from the top to the lower end of the frame. All the stuffed surfaces should now be covered with wadding (i.e. the seat, inside back, and top and inside arms). This prevents the hair from working through the outer cover and gives softness of finish.

The Outer Covering.

The material to form the finished cover should be cut to the correct shape, with 1 in. turnings, in the following pieces—

(*A*) Seat. (*C*) Inside and outside arms.
(*B*) Inside and outside back. (*D*) Scrolls for arms and back.

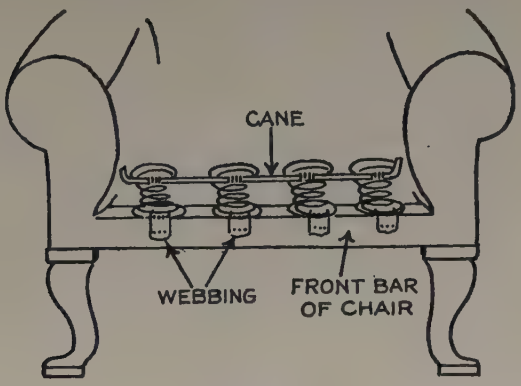


Fig. 64.

If very expensive material is being used, some may be saved by machining unbleached calico to three sides of the seat—to the inside back and inside arms. These false pieces will not show, because they will be drawn underneath and nailed to the frame.

Get the various pieces in position and nail lightly. Next pull very tightly, and re-fix the nails. The scroll pieces are finished most neatly if sewn in position with a curved needle.

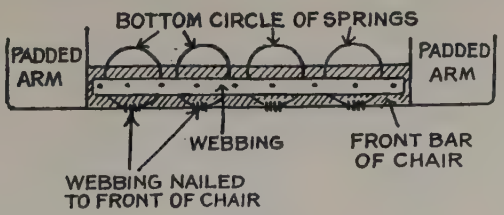


Fig. 65.

Where the inside arms meet the back, the material must be notched on the cross to ensure a perfect fit.

The seams should be finished with gimp or cord to match. The gimp is fastened invisibly with gimp tacks, and cord is sewn on with a curved needle.

Over the bottom of the chair a piece of black canvas is nailed, to neaten it and keep the dust from entering between the springs.

Some chairs have no further covering after the last layer of unbleached calico, and, if they are left like this, loose covers are made—usually a less expensive method of finishing.

Castors should be looked to and repaired, if necessary, or removed, and silent domes fixed instead.

Finishing the Front Roll of a Deeply Upholstered Chair.

Modern chairs are very deeply upholstered, and it is therefore necessary to adopt some means of keeping this padding in place, particularly the roll on the seat of the chair which gets most of the weight while in use.

In chairs of this description a set of half-sized springs, the same as those used on the arm of a chair, will be found across the front of the seat, probably five or six, according to the size of the chair. If replacing these, one should first interlace webbing through them, going over the lowest coil of the spring, draw it tightly, and fasten with tacks at each end of the wooden frame; and then, through each spring, but only the first coil again, put small tabs of webbing, about 4 in. long, which should be brought down and tacked to the wooden frame in front (see diagram).

Now, in this way, the bottom of the springs are securely fastened to the framework, but the top is not attached to anything. To hold the top, a piece of cane ($\frac{1}{4}$ in. in diameter) is put across the top front of the springs, and, where it touches each spring, it should be securely fastened with upholstery twine. The cane should be about 1 in. longer on each side than the space covered by the springs, and these ends should be bent back to fit in amongst the stuffing of the chair. This foundation of springs and webbing makes an excellent setting, to which the front roll described in this Chapter may be stitched.

CHAPTER XX.

LOOSE CHAIR COVERS.

With a little practice, most housewives can make their own "Loose Chair Covers"; they do not require fine sewing, so are quickly made.

For a beginner, it is advisable to choose a simple, all-over design which will not require much matching, or material with no pattern.

For most purposes, single width cretonne will cut to better advantage; but for large pieces of furniture, the double width will be found convenient.

Cretonne is generally 31 in. wide; some French cretonnes are narrower, and printed linens have as a rule rather wide selvedge, so their "working" width may be under 31 in.

To Measure the Quantity Required.

First measure inside back from seat to where the outside back will join on. Allow 1 in. for making ($\frac{1}{2}$ in. on each end), and then from 3 in.–4 in. for a tuck-in at the seat end.

Say the inside back measures 26 in. + 1 in. for making, and 4 in. for "tuck-in" = 31 in.

The full width of the cretonne is generally used, unless the chair is small; then only the width of the chair need be cut; of course, $\frac{1}{2}$ in. on each side being allowed for making. Care should be taken to measure always at the widest point of the chair.

Then measure inside arms and seat in the same way as the inside back.

Outside Measurements.

No "tuck" is required. If the seat is to be finished with a frill, the outside measurements should come to about 7 in. from the ground. If there is no frill, cut to within 2 in. of the ground. For frill, allow one and a half times the circumference of the chair. Frills are generally 7 in. deep. Allow $\frac{1}{2}$ in. at the top for making and 1 in. at bottom for hem; so cut $8\frac{1}{2}$ in.

The scroll ends on the front of the arms, and the sides of the back should be cut on the straight thread; so, if the scroll is much curved, it cuts into a good deal of material. Cut all the pieces with the pattern going up.

As each piece is cut, mark it.

In cutting the arms, place material right or wrong sides facing, or they will both be cut for one arm.

Pinning Together.

Find centre of inside back and centre of cretonne. Pin in position, wrong side out, also the inside arms. Where the arms

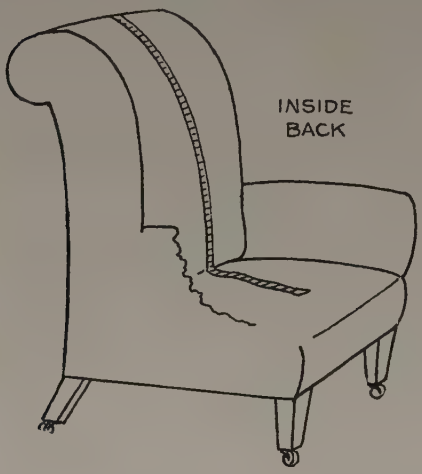


Fig. 66.

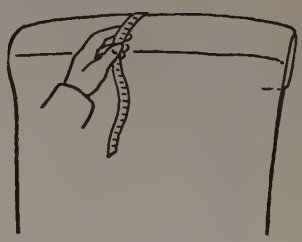


Fig. 66A.

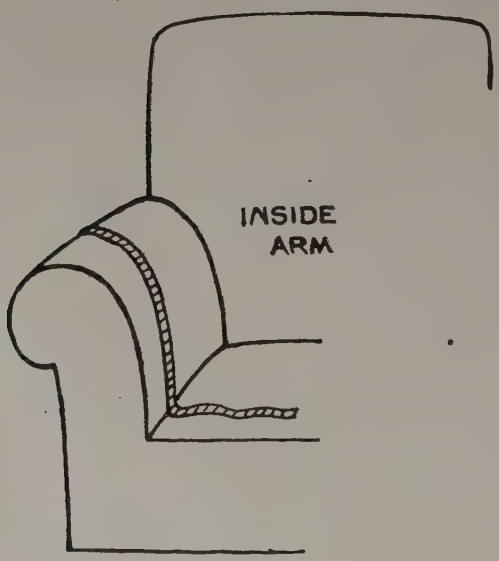


Fig. 67.

join the back, the cretonne should be carefully notched to allow accurate fitting. For outside pieces, secure at the bottom of chair and then pin up at the top joins. If no scrolls are required, the

inside and the outside back are pinned together at the sides. If scrolls are required, pin the scroll on to the chair, then inside and outside back to it, arranging any fullness neatly at the top. Use plenty of pins, and work them in securely.

If an opening is required, it is made on the left-hand side of the chair as one faces it.

Now remove the cover and trim all seams down to $\frac{1}{2}$ in. Then put nicks along every seam 2 in. apart.

Seams that are not to be piped may now be stitched.

For the piping, crossway strips must be cut sufficiently wide to cover the piping cord, and allow $\frac{1}{2}$ in. for sewing—generally $1\frac{1}{2}$ in. wide. Join them together, stretch the piping cord, and cover it with the strips; rough tacking is sufficient. Insert the piping cord where the cover has been pinned, and backstitch securely.

The cover can now be put on (wrong side out) and the seat pinned into position. The front band is piped on to the seat, just at the turn of the chair.

To Finish the Bottom of the Chair.

Make the piping with the cord to one edge. Sew it securely to the bottom of the cover; hem up the crossway material neatly on the wrong side.

Putting on a Frill.

Put on the chair cover, and with a wooden ruler measure how many inches from the ground the cover is at its shortest point; allow $\frac{1}{2}$ in. for the making. Note the number of inches and measure evenly all round.

Remove cover, trim bottom line to the $\frac{1}{2}$ in., tack on piping cord, gather the frill, and sew it on securely to the piping cord.

All covers, when finished, should well clear the chair castors.

Press studs or buttons are the most suitable fastenings, as they are not harmed by the washing process.

Measurements for an Ordinary Armchair.

Inside	back	26	plus 1	plus 4	=	31 in.	
,,	arm	17	,, 1	,, 4	=	44 ,,	(2 arms)
,,	seat	24	,, 1	,, 4	=	29 ,,	
Outside	back	32	,, 1		=	33 ,,	
,,	arm	19	,, 1		=	40 ,,	(2 arms)
,,	front	13	,, 1		=	14 ,,	
Allow for scrolls and piping, 27 in.					=	27 ,,	
						218 in.	

= 6 yds.

Piping cord = 2 knots.

CHAPTER XXI.

POUFS.

THE making of poufs, or "humpties" as they are sometimes called, is a matter of simple upholstery which can easily be done at home. There are various shapes: round and square are dealt with here.

ROUND POUFS.

Materials Required.

2 yds. of strong unbleached calico, 27 in. or 30 in. wide.
3 yds. of blind cord.
Enough cotton wool to cover top and bottom.
Two squares of material for outer cover, 27 in. or 30 in.
Sufficient stuffing to fill the pouf, either wood shavings or fibre stuffing.
Fancy cord for finishing.
Strong carpet thread or fine upholstery twine.

To Make.

Take two squares of calico 27 in.; this, when finished, gives a medium-sized pouf. Fold in half both ways and round off the corners.

Machine two rows of stitching 1½ in. from edge and 1 in. apart round the calico on the right side, leaving 8 in. unstitched as an opening for stuffing.

Run the blind cord through this slot.

Stuff the pouf very tightly.

Backstitch securely the opening through which the stuffing was put.

Pull up the cord tightly. Now knock the pouf into shape; as the shape improves, the cord will loosen; this must be tightened from time to time, until it is eventually tied up as tightly as possible, the cord being carried twice round the "waist" for security.

Cover the top and bottom of the pouf with cotton wool, tacking it in place. This is done simply to give an added softness.

Make two squares of the material, for outer covering, 27 in. Machine on three sides, on the wrong side, with ½ in. turnings.

Put this box-shaped piece on to the pouf. Tack the open side together and slipstitch neatly.

It must be remembered that at this stage the outer covering must fit very tightly, and it should really be difficult to get it over the stuffed shape.

Where the corners were rounded on the inner lining, these corners are left on the outer material, and so make the "ears." About 8 in. from each corner, the seam of the outer covering must be sewn very securely to the inner shape. This is done with a curved needle and the carpet thread or twine, with a small back-stitch on the outside and a long stitch through the pouf.

The corners must next be arranged. Draw the corner very tightly from the top and bottom. Lay these two pieces together and gather, using twine; draw up and tie securely. If this does

FIG. 68.—ROUND POUF.

not seem firm, with a double-pointed needle take several stitches backwards and forwards through the corner of the pouf.

The cord for finishing should next be fixed. It may be thick, thin, or double; also it may be put on flat or twisted.

Neaten the end of the cord with ordinary cotton and start at one of the corners; fix the cord under the ear and, with a curved needle, stitch as neatly as possible all round the four sides.

If a double cord has been used, at each corner where the ears come, they may be put through the cord, thus getting a line of cord above and below the ear.

ROUND POUF. (*Another Kind.*)

The same materials as given above will be required, with the exception of the blind cord and cotton wool.

To Make.

Again take two squares 27 in.

Lay these squares together and, instead of rounding the corners as before, cut them out as shown in diagram. Machine these squares together on three sides, and turn right side outside.

Stuff tightly. Backstitch the opening.

Machine the outer cover on three sides, with square corners; and turn right side outside.

Where the corners come, run upholstery twine through, and leave ends for pulling up. Put this cover over the stuffed pouf. Slipstitch the open side. Pull up the corners, and tie very tightly. The pouf can be finished with cord round the outside; alternatively, a crossway piece of material looks very well.

Square Pouf.

The same materials as before, with the exception of the blind cord.

To Make.

Machine two squares 27 in. on three sides; turn on to right side.

Lay side seams together, and measure down 8 in. or 10 in. from corner; take this as the apex, and measure 8 in. on each side,

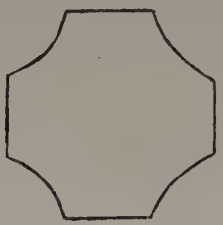


Fig. 69.

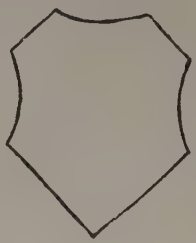


Fig. 70.

Square Poufs.

until the edge is reached; draw a curved line, and machine to shape. Trim away point to within ½ in. of stitching, notching to give better fitting.

Stuff pouf very tightly, and slipstitch open side. Cover with cotton wool, top and bottom.

Take two squares the usual size for outer covering. In this case, they are not machined together, but upholstered separately on to the stuffed shape, all four sides being done first, leaving the eight pieces loose, which will form the corners. To finish the corners, slipstitch the loose ends together, gather tightly to fit the pouf, and sew very securely.

Finish all round with cord for trimming.

CHAPTER XXII.

REPAIRING AND RENOVATING CARPETS.

A KNOWLEDGE of carpet sewing is useful, should it be necessary to alter a carpet's size and shape.

Materials Required.

Strong black or coloured carpet thread, and
Carpet needles.

The Joining of Raw Edges.

This method is suitable either for tapestry or for Brussels carpet. The first step will be to match the pattern where the alteration is to be made ; next, to blanket-stitch the raw edges of the carpet on the wrong side, taking the stitches about four threads down, being careful that these stitches do not show on the right side.

Now lay the two pieces of carpet together, right side inside, and, using the oversewing method, seam them very firmly together, taking the stitches about three threads down. When finished, the join should be very heavily pressed by a hot iron to flatten the seam. Damping the surface to be pressed will help to give a better result.

Second Method of Joining Raw Edges.

Again match the pattern where the join will come. Then take some carpet braid, either black, or a colour to tone with, or match, the carpet, and loop-stitch this in position to the raw edges of the carpet on the wrong side, being careful that no stitches show through on the right side. It will be found most convenient to work from left to right, taking the stitches four threads down. The inner edge of the carpet braid should be hemmed in position. When this method has been carried out on both edges, the two pieces of carpet should be tied together with the pattern matching. This is called tie-tacking, and is done by taking the thread through both pieces of carpet, and tying securely in position ; this tie-tacking makes the next step very much easier. The two bound edges must now be joined by seaming, the stitches being taken through the braid and carpet, about three threads down. When finished, press very thoroughly to flatten. When damping for pressing, do not wet the braid too much, because it is apt to shrink, and this shrinkage will spoil the effect of a good join.

To Join Pile Carpets.

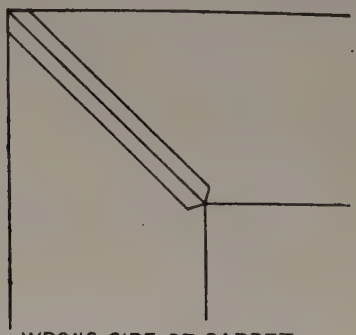
Draw out the pile of the carpet about 3 to 4 in. down, keeping intact the under threads on which the carpet is woven. This would

apply to the finishing of stair carpeting ; but if it is a case of repairing a worn piece, all the worn pile should be taken away. Now, take the under threads and, dividing them into bundles, herringbone them securely to the underside of the carpet ; this edge is then finished with carpet binding, which makes a very secure finish.

To Mitre a Corner.

When altering the size or shape of a carpet, it may be necessary to remake the border, and this will entail the correct mitring of the corners.

First, match the pattern and allow 1 in. for turnings ; then cut the border diagonally at the corners. Tack down the amount allowed for turnings, and blanket-stitch the edges, securing every third stitch to the back of the carpet. When this has been done



WRONG SIDE OF CARPET
SHOWING FINISHED MITRE.

FIG. 71.

to the two sides of the mitre, tie them together, matching the pattern. Then, working from the right side of the join, stitch the two pieces together securely. To do this, insert the needle at least 1 in. away from the join on the right side, and, running it diagonally between the folds, bring it up ½ in. farther down the join on the opposite side, and again 1 in. from the join itself. Continue this stitch until the join is complete, pulling the stitches tightly, though keeping the work very flat.

To Patch a Carpet.

Cut away the worn part, allowing 1 in. all round for turnings ; then cut diagonally at the four corners the depth of turning allowed. This portion must now be tacked down and blanket-stitched in position. Cut the patch to match the pattern as far as possible, allowing 1 in. for turnings. Again cut corners of patch diagonally, tack down and blanket-stitch to keep from fraying. Place the

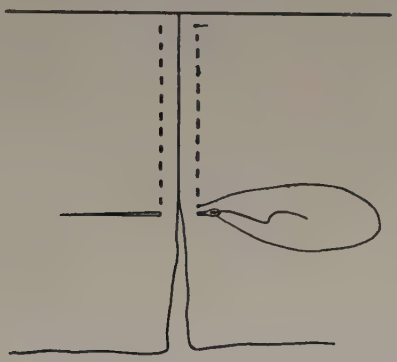
patch in the hole, and tie in position at the four corners, and, if a large patch, in the middle of the sides as well.

Then, working as for the mitred corner, stitch the patch firmly in the hole. Allow the stitches to follow the threads of the carpet, working them backwards and forwards, but not allowing them to show on either the right or the wrong side of the carpet; instead, they should pass between the folds.

When finished, the patch must be pressed very well to get a flat effect.

Joining Felt.

To join felt, the edges must first be cut as straight as possible. Then tie the pieces together in several places, and, using either black



WRONG SIDE OF FELT JOIN.

FIG. 72.

or coloured carpet thread that matches the felt, start the stitch which joins. Insert the needle on the wrong side, $\frac{1}{2}$ in. from the join, and, going straight through the middle of the felt, bring up the needle in the second piece of felt $\frac{1}{2}$ in. on the other side of the join. Then put the needle in again $\frac{1}{4}$ in. from where it came out, and go again through the middle of the felt to the opposite side, continuing this stitch all down the join. The only portion of the thread which shows should be the $\frac{1}{4}$ in. stitches formed where the needle is drawn out and inserted, and they should look like a row of running stitches on the wrong side. The stitches must be drawn tightly, but not so tightly that the join puckers. When pressed and in use for some little time on the floor, the join should be quite invisible.

CHAPTER XXIII.

CLEANING AND RENOVATING FURS: CURING SKINS.

FURS can be cleaned and renovated at home quite easily, and in this way much expense may be saved.

To Clean Grey or Dark Furs.

Long-haired furs, such as fox, skunk, bear, etc., may be cleaned with hot bran.

Method.

First, shake and beat the fur well, to remove as much loose dust as possible.. Next, carefully comb the fur, using a steel comb with fairly coarse teeth, and so remove any matted or rough pieces, being careful not to drag the hairs from the skin.

Heat sufficient bran in the oven to clean the fur. If for a large fur, a basin-full should be heated.

Lay the fur flat on the table, and rub in the hot bran with the hand. Shake the fur from time to time, and continue rubbing in fresh bran until the fur feels clean. Shake thoroughly to remove the loose bran and comb again. A silk or satin lining should be rubbed with benzine to remove any grease.

Seal, or Seal Coney.

Shake and comb the fur as in the previous method, and then rub in fig dust. Hot bran may be used, but from furs with short, close hairs it is very difficult to remove the particles of bran, and it will be found easier to remove the fig dust. Shake thoroughly, and comb to finish.

White Furs (such as *ermine, white fox,* etc.).

These furs should be cleaned by first shaking and combing thoroughly. Then make a paste of powdered magnesia and water; rub this on to the fur, and leave for twenty-four hours. Now rub it off, using a clean white cloth, and then shake and comb the fur.

To the amateur it may seem a drastic method to apply this wet paste, but, when dry, this rubs out very easily, and the method is a most successful one. Dry magnesia may also be used, but generally the paste is more effective.

Storing Furs.

White Furs. These should be sprinkled with dry magnesia and folded in white paper; then an outer covering of newspaper into which some moth preventive has been put should be wrapped round and tied up securely. During storage, white furs should be

examined from time to time, shaken out, and left in the air and sunlight for some hours.

Dark Furs. Place these in newspaper into which some moth preventive has been put ; machine the edges of the paper together, and store in a dry place. The printers' ink is, to some extent, a protection against moth, but it is also necessary to add some substance such as camphor, moth ball, etc.

Renovation of Furs.

If furs need remodelling, it may mean that the shape has to be entirely altered, or a new piece of fur inserted.

To Cut Fur.

It should be remembered that fur should never be cut with scissors—a sharp penknife should always be used, and the fur cut on the wrong side, with short strokes of the knife. In this way the hairs of the fur are not damaged.

To Join Fur.

When joining, choose two pieces in which the fur goes the same way ; if properly matched, the join should be almost invisible on the right side. Hold the pieces together, wrong side out, and with a long needle push down all ends of fur, so that they will not become entangled in the thread ; the skin only should be showing when ready for seaming.

To Seam.

Use a fine needle and silk thread, and, working from left to right, oversew the two pieces to be joined. The stitches should be deep enough to hold the skin, but not too deep, otherwise the fur will be caught in, and the join will be made much more marked.

To Cure Skins.

Such skins as mole, rabbit, fox, sheep, or goat, can be cured by the following method very successfully, and to people living in the country it may prove useful to be able to preserve them at small cost.

First stretch the skin on a board, the fur downwards, and nail it out to its full extent. Scrape every particle of fat and flesh away with a blunt knife. Next make a solution of equal parts of alum and salt, mixed with hot water, using 1 qt. of water to 1 lb. of alum and 1 lb. of salt. When cold, soak the skin and leave for three days. Make a paste of flour and water, using boiling water, and, when cold, take the skin out of the alum water and immerse it in the paste. After this it should be washed in several waters until quite free from stickiness. Then hang in the air till nearly dry. Stretch again on a board, nailing it out as before, and rub it with pumice stone ; this prevents its drying hard ; it should also be rubbed with the hands, when it will become quite soft and pliable. It can then be mounted for use.

CHAPTER XXIV.

GLOVE-MAKING.

With the assistance of a good pattern, leather, suède, or chamois leather gloves can be made at a much smaller cost than ready-made ones can be bought.

Patterns.

These may be obtained from: Mrs. Staite, 72 Gibbins Road, Selly Oak, Birmingham.

Cutting Out.

Having chosen the skin to be used, the next thing to do is to cut out the gloves. Lay the pattern on the skin, choosing the best part, and seeing that the stretch of the leather is *across* and *not down* the hand, and if the skin is suède, that the rub of the leather is going the same way in both gloves. Next put the pattern on the wrong side of the skin, and, with a sharp needle, mark round the outline of the pattern ; this helps very much in cutting out. Follow the directions given with the pattern very accurately, allowing whatever turnings are required, or else cutting with no turnings if so directed.

Making up.

If in chamois leather, gloves look well when stitched with black silk twist, forming a running stitch, with seams on the right side. Leather gloves should be sewn with silk, with two threads, one on each side of the seam, so as to give the appearance of machine stitching. Proper glove needles should always be used.

Lay the glove flat, and, on the back, mark in where the darts should come. These should be stitched first.

To start joining up, it is best to begin at the base of the fingers, putting in the side pieces and sewing each finger to within an inch of the top. This is particularly necessary in suède, because the leather pulls, and very often the finger may need to have a little trimmed away. Set in the thumb in the same way, and, lastly, join up the side seam.

CHAPTER XXV.

RENOVATION OF SUÈDE SHOES.

SUÈDE shoes which have become shiny and apparently past wear can be made to resemble glacé kid by the following process, and their appearance so improved that they will last very much longer.

The only material necessary is a tin of either "Kiwi" or "Nugget" polish. In choosing the polish, see that it is quite fresh and *soft*. Brown or black shoes should be treated with polish of the same colour, but grey shoes may be made either black or brown.

Method of Work.

Put the shoes on trees, or, if these are not available, stuff them tightly with newspaper, and brush them very thoroughly with a wire brush. Next take a clean cloth, and, working in a circular movement, rub the polish well into the suède, paying particular attention to the toes and any creases which may have been formed during previous wear.

With the first application of polish the suède should have a soaked appearance, and when enough polish has been applied to obtain this, they should be left for twenty-four hours. After the first application has been allowed to soak in, the successive number of applications of polish will depend entirely upon how quickly the leather takes the polish and gets the appearance of glacé kid.

Rub some polish into the shoes each day, rubbing and polishing until the desired surface is obtained.

CHAPTER XXVI.

RAFFIA TRAY—ROUND OR OVAL.

To make this tray the materials required will be—

Cane—which forms the coil and so makes a foundation for the stitches. Cane is sold in numbers 0 to 12, and either a fine or a coarse grade may be bought, according to the effect required.

Raffia—either plain or coloured. This is used to form the stitches over the cane, and carries out the design chosen.

Tapestry needles.

A piece of wood, three ply—either round, or oval, according to the shape it is to be.

The stitch which is used in the making of the tray is known as the "Lazy Squaw" stitch. This is the simplest of all stitches in raffia work, and may be used in its simplest form, or more elaborately, to make a foundation for various designs.

It must first be decided what shape the tray is to be, because the beginning of the coil will be started round, oval or square, according to what the finished effect is to be.

To Start the Coil.

Soak the cane for several hours to make it soft and pliable, and prevent it cracking during work. Pare the end of the cane to a point, from 1 in. to 2 in. up. This makes the beginning of the coil much flatter. For the same reason it should next be curved by drawing it over a pencil, or the needle. Thread a tapestry needle with a medium length of raffia, and, holding the unthreaded end on the pared end of the cane in the left hand, bind the raffia round the cane for about an inch. Then very neatly turn this covered end on to itself, and secure with a stitch through the centre, keeping this small round as flat as possible. When the centre is secured, the actual stitch commences.

The accompanying illustration shows the direction of the stitches very clearly, but the directions may prove helpful.

(1) Holding the centre in the left hand, pass the raffia over the cane which will form the next row of the coil.

(2) Pass the raffia once more over the cane, and, this time, bring the needle up in the centre of the coil. This gives the effect of a short and a long stitch. When this has been done once all round the centre, the stitch will come up between the second row of cane to form the long stitch, instead of through the centre, and this method is continued until the required size is obtained, the working being carried outwards for each succeeding row.

During the working it may be necessary to join either the cane or the raffia.

To Join Cane.

Pare the old cane on the underside, and the new piece on the upper side for about 1 in. Hold them firmly together, and continue the stitch.

To Join Raffia.

When fresh raffia is needed for the work, lay the finished thread along the cane for about 1 in., and, having threaded the needle,

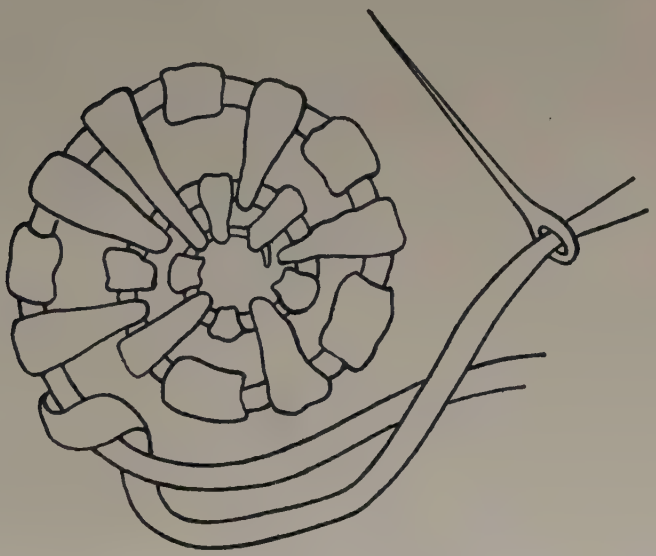


Fig. 73.

lay the end of the new strand over the old and wind it twice round the coil until secure—then continue the stitch.

To Introduce Coloured Raffia.

If the design is being worked in coloured raffia, the various colours are put in by the same method as joining new raffia strands.

To Finish the Tray.

When sufficient coil has been covered to form the tray, which, at this stage, should be of the same size as the piece of wood which will form its foundation, the border must next be made. This should be about 1½ in. to 2 in. high.

To Start the Border.

The first row of coil which will form the base of the edge should be a continuation of the last row of coil forming the tray. One coil is set upon the other, so as to form the border, being held in position by means of the stitch which has been worked all through the tray. The border when finished should be 1½ in. in height.

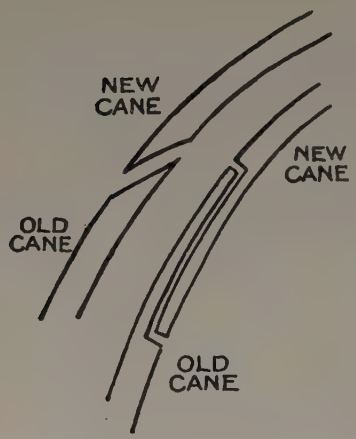


Fig. 74.

To Finish Off the Coil.

Pare the end of the coil for about 1 in. on the underside, and hold this firmly in place; then go on sewing until the coil quite disappears.

To Finish Off the Raffia Strands.

Run the strand backwards and forwards between the coil, so that it does not show; pull tightly, and cut the end closely.

To Mount the Tray.

In the piece of wood chosen for the base, holes about 1 in. apart and ⅛th in. from the edge should be made. The raffia tray is then sewn firmly to this with strands of raffia.

CHAPTER XXVII.

TRAY WITH WICKER EDGE.

CONVENIENT and durable trays with wicker edges may be made from oak or ply wood. They are light to carry, easily kept clean, and can be made in any size or shape desired.

If oak is used for the tray, it is, of course, more lasting ; but three-ply wood answers the same purpose very well and makes a cheaper tray.

Materials Necessary.

(1) A piece of wood the required size.

(2) Round cane to fit the holes made.

(3) Finer cane for weaving the plait.

Method of Work.

Having chosen the piece of wood, bore holes all round $\frac{1}{4}$ in. from the edge and $\frac{5}{8}$th in. apart. Cut lengths of cane 11 in. and soak about 4 in. of these in water.

Insert these in the holes, leaving 3 in. on the underside of the tray, plaiting thus—under, over and down.

The portion of these canes on the top side of the tray will now be called the uprights.

The next step is the weaving ; this is done in the finer cane.

Take three lengths of cane, place the first between any two uprights, the second between the next two, and the third between the next.

Weave these, following this formula: over two, and behind one. This weaving gives the edge of the tray, and as many rows as are necessary to give the required height should be woven. The uprights are next soaked in water for one hour to soften them, so that the top plait can be carried out.

To Make the Top Plait.

Bring down three uprights, and put one behind, arranging them so that there are three groups of two spokes in front, and one group of two behind ; then put three groups of three spokes in front, and one group of two behind. Continue plaiting, leaving behind the shortest of the last three uprights, or spokes.

To Plait.

Put two spokes from the front between two uprights, bring the two from the back over them, and pull one of the uprights down. Continue until the end is reached; then pull out the first four or five spokes to be plaited down, and carefully work them in again with the last spokes of those just worked. At the end, the groups again work into three two's instead of into three three's.

When the plait is finished, the wooden portion of the tray may be stained and varnished, or just rubbed with linseed oil.

CHAPTER XXVIII.

THE USE OF WIRE IN HOMELY HANDICRAFTS.

ONCE a certain amount of manipulative skill has been acquired, many useful kitchen utensils may be made out of wire. The wire can be bought at any ironmonger's, and children should be encouraged to make wire utensils, because the difficulty of manipulation greatly increases the skill of the worker.

A Toasting Fork.

Take three long lengths of wire of medium thickness ; fold these double, except about 4 in. at one end, which end will eventually make the prongs. Now, fixing the ends of the wire firmly in the vice on the bench, twist the strands tightly to form the handle, except at the extreme top, where it should be formed into a round, by which it will be hung when not in use. The wire will be found too stiff to twist by hand alone, but if the ends are firmly fixed in the vice, a pliers may be used to do the twisting.

When the handle is finished, the three ends which were left of single thickness should be bent to form the prongs ; the ends of the prongs should be filed down until they are sharp and smooth.

Egg Whisk.

The wire should first be prepared by drawing it over some smooth surface, such as the handle of the pliers ; this is done to remove all twists and knots and to make the wire easier to work. When smooth, the wire should be bent with long loops about 8 in. These should be curved out from the handle, their greatest width coming about 6 in. from the handle, before they are rounded to form the top. Each loop comes back to the handle, and the wire is then turned in the same direction again to form a new loop. These should be continued until sufficient loops have been formed.

Now, through the handle end of each loop a piece of wire should be threaded and twisted very tightly to hold the base of the loops in place. Also, the extreme top of the loops should be fastened by a piece of wire, twisted; holding them in position where they cross over each other.

The handle must now be bound. Take finer wire, and, with the aid of the pliers, bind the base of the loops, and continue this binding to form the handle. This finish must be drawn very tightly and fastened securely, otherwise it will work loose during use.

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CHAPTER XXIX.

HOME DYEING.

This craft should receive attention in Handwork Classes, and be applied to thrift articles carried out at very small cost. Ordinary sacks may be cut up, the best pieces being taken for dyeing. They should first be washed and then dyed with any of the commercial dyes on the market. The pieces may then be made into a variety of household articles, such as cushion covers, blotters, runners for tables, etc., etc. The artistic value of these is greatly increased if, in addition to the dyeing, they are stencilled.

For larger articles, such as curtains, bedspreads, etc., cheap hessian may be bought and dyed. It may be thought that it is rough and poor material, but, when dyed, the texture becomes closer, and, with good dyeing and a handsome stencil, very charming and artistic articles are produced.

Dyed Swabs.

Jumpers made from dyed swabs and decorated with coloured woollen borders are another example of cheap home dyeing.

The swabs chosen should be the large size, first thoroughly washed and then dyed.

To make up, lay the two swabs together, and join up a portion of what will form the under-arm seams, also the seams which make the shoulders. Then, to decorate the garment, a design in various coloured wools should be interwoven in and out of the squares which form the mesh of the material. The design may be carried out all over the jumper, or only as a border. This must be left to the taste of the worker, and if a longer sleeve is required, two smaller swabs should be dyed and used for this purpose.

CHAPTER XXX.

USEFUL HINTS.

To Sharpen Scissors.

All good housewives should be able to do this, and so avoid the expense and delay in sending them to the cutler's.

Most scissors can be sharpened with a single cut triangular file, such as is used for sharpening saws.

Open the scissors, rest the back of one blade on the table, and, from the cutting edge, push the file away towards the back, at the same time letting it travel somewhat towards the point. Keep the file at the same angle as the existing surface. Then turn the scissors over and proceed as for the first blade.

The cutting edges of scissors should always touch throughout the cut; consequently see that the pivot is screwed tightly, and that the blades are not bent away from each other.

A Rap Stick.

In boot factories, operatives make use of a stick covered with emery cloth on one side and leather on the other. This is used to sharpen their clicking knives. It will be found a useful adjunct in respect of ordinary domestic knives. The usual size is about 15 in. long, 1½ in. wide, and ½ in. thick; about 3 in. is used as a handle, and this need not be covered.

Varnishing.

In the chapter on "Staining," spirit varnishes have been dealt with, but a word should be said in favour of hard oak varnish. It takes a considerable time to dry (about two days), but gives excellent results; and another advantage is that it is simple to use.

A flat brush is needed with "cut" edges, not less than 1½ in. wide, for ordinary work, and, for large flat surfaces, wider.

When applying the varnish, work the brush well out—i.e. keep on spreading the varnish about until it is spread uniformly and thinly on the wood, and there is no more left in the brush. In the first instance the brush should be only lightly charged with varnish. Now take the brush *across* the work, to equalize still further the spreading of the varnish, and then "stroke off" in the direction of the grain.

Stains.

To prepare walnut stain, add a little Bismarck brown to Vandyke brown dissolved in water. Bismarck brown dissolved in water makes a mahogany stain, and, when it is used with ebony stain suitably mixed, a Rosewood effect can be obtained. Green is

often needed, and all these mentioned can be obtained from any colourman or chemist's.

Water stains are simpler to use and are really preferable to spirit stains, but for small objects spirit stains are sometimes useful. These can be obtained from any firm dealing in skins. They are very concentrated, and a very small amount should be dissolved in methylated spirit; when dissolved they are ready for use.

Use of Sponge in Staining.

A more satisfactory stain can be obtained by using a sponge instead of a brush on large surfaces, especially if the surface is damped first.

Greasy Hammer Head.

The hammer often slips off nail heads. When this occurs, rub the face on a brick floor, a stone sill, or emery cloth. This cleans it and makes it grip better.

Greasing Nail Points.

Often when nails are being driven into hard wood the points bend, or the nail itself bends. To avoid this, always bore a hole with a bradawl, and oil the point of the nail. There will be no bending then. A little bacon fat will do, or beeswax and turpentine.

Wide Shelves.

If crockery has to be stored on shelves which are not grooved like an ordinary dresser, the carrying out of the following suggestion will make it possible to stand the crockery up.

On the shelf, about 2 in. from the wall, nail a lath three-eighths of an inch square. This will hold the edges of dishes and plates.

Rusty Screws.

Often it is necessary to unscrew a table top, a bearer, a shelf, etc., but the screws appear to have rusted into the wood. To remedy this, pour a little paraffin on the screw head, and leave for a time; or, heat a poker, and apply it red hot to the screw head, and hold it there for a short time. In the one case, the oil overcomes the rust, and, in the other, the heat expands the screw, and loosens it.

To Get a Plumb Line.

Tie a key to a length of string. This makes an instant and effective line.

Cleaning Paint Brushes.

Good brushes are expensive, and their proper care is an important point.

When using paint or varnish brushes, always keep them in water between occasions of using, to prevent their going hard.

Polish brushes and pads are best kept in an air-tight tin.

To clean paint brushes, dip them in turpentine, which will soften the paint. They should be gently pressed from the base to the point, this action removing the paint. Varnish brushes are cleaned in the same way. If they have got very hard, they may be boiled in soda and water, and then cleaned in turpentine.

Another way of cleaning brushes, and particularly useful if they are not going to be used for some time, is to wash them in soap and water. Hold the soap in the left hand, and gently work the brush backwards and forwards on the soap until the bristles are full of lather; then press the brush from the base of the bristles to the point, when the paint comes out freely. This should be repeated until all the paint has been removed. They should then be rinsed in cold water, and dried in a moderate temperature.

To "Flatten" or "Brighten" Paint.

When painting, if what is known as a "flat" finish is required, let the paint stand in the tin until the oil has risen to the top; then pour this into a jar, and replace in the paint with turpentine. This will make it "flat" and it will also dry quickly.

If a "bright" finish is wanted, put some oil varnish into it and stir it up well.

Renovation of Leather.

When purses, bags, suit-cases, etc., become worn, there is an excellent commercial preparation called "Nuagan" which can be used to renovate them. It can be bought in various colours, to match different kinds of leather.

To use this preparation, first wash the leather with soap and water to remove any grease. Then, using a fine brush, paint the mixture thinly over the worn part. One or two coats may be needed, according to the condition of the leather, and it will be found more successful to apply several thin coats rather than one thick one.

Various Uses for Empty Reels of Different Sizes.

Very artistic candlesticks can be made by using empty reels. For this, large sizes are best—those on which carpet thread is generally sold, and either two or three will be needed for each candlestick, according to the height desired.

The reels should be stained first, and if very dark Vandyke stain is used, an effect like ebony results. Next, rub them with glass paper and cover them with a coat of size, and, lastly, finish with another coat of stain. They should then be fastened together with Croid, and stuck very securely.

If the worker has a lathe, a small turned base should be made with a groove, into which the bottom reel will fit. If it is no

possible to make this at home, it could be obtained from any carpenter for a few pence. The base should be stained to match the reels, and the joined reels firmly fixed into the groove by means of Croid. At the top, where the candle will go, a small socket should be cut in the upper reel, deep enough to allow the candle to sink well down, so that it stands steadily with no danger of falling out. The wood may be either varnished or oil polished.

Another use for small reels is to make them into door-stops. They should be stained and fixed to the floor by means of a long screw passing down the centre of the reel, and sinking into the floor at least $\frac{1}{4}$ in.

Labour-saving Treatment of Copper, Brass, Nickel, etc.

If copper and brass ornaments are covered with one of the transparent lacquers now on the market, much labour may be saved.

To Apply the Lacquer.

First, clean the metal article thoroughly by washing in hot soapy water, with a little soda added, to remove all grease. Then polish in the usual way, using either a home-made metal polish, or a commercial one. When the greatest brilliance possible is obtained, the lacquer should be applied.

Take a soft brush, and, dipping it lightly in the lacquer, paint a thin coat all over the article, being careful never to go over the same place a second time. If this rule is observed, a smooth surface will result. It dries at once and, is quite invisible. The lacquer is difficult to apply, and, if the first attempt is not successful, it should be washed off and another coat applied.

In winter time it is a good plan to heat the metal, and to put on the lacquer while the metal is still warm ; in this way it " works " better.

As well as ornamental brass or copper, such things as knockers, letter boxes, door handles, bathroom taps, etc., may be treated in this way, and should retain their brilliance for at least six months, during which time they will only need dusting.

Paint as a Labour-saving Device.

Nickel taps may be coated with either aluminium or white paint.

First, wash the taps thoroughly ; then apply a thin coat of paint. After this has dried, a second coat may be put on, when a solid protective coating should be formed, which will obviate the necessity of all cleaning, except simply washing with soap and water.

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